

THE
PAPERS
READ BEFORE THE
American Institute of Instruction,
AT
LEWISTON, ME., AUGUST, 1872,
WITH THE
JOURNAL OF PROCEEDINGS,
INCLUDING
THE CONSTITUTION.

PUBLISHED BY ORDER OF THE BOARD OF DIRECTORS.

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Order of Exercises.

TUESDAY, AUGUST 13.

A STATED meeting of the Directors will be held at 4½ o'clock,
P. M.

The Institute will be organized at 7.45 o'clock, P. M.

The usual opening exercises will be followed by the trans-
action of business.

At 8.15 o'clock, an Address by Hon. JAMES G. BLAINE,
of Augusta, Speaker of the U. S. House of Representatives.

WEDNESDAY, AUGUST 14.

At 9 o'clock, a Paper by WALTER SMITH, State Director
of Art Education in Massachusetts, on "Drawing in Graded
Public Schools—What to teach, and How to teach it."

Discussion.

At 11 o'clock, a Paper by J. BAXTER UPHAM, M. D.,
Chairman of Committee on Music of the Boston School Board,
on "Vocal Music as a Branch of Instruction in our Common
schools."

Discussion.

At 2 o'clock, a Lecture by Rev. Dr. C. A. BARTOL, of Bos-
ton, "The Idea of Industrial Education."

ORDER OF EXERCISES.

The remainder of the session will be devoted to a discussion of this subject.

At 8 o'clock, a Lecture by Hon. J. W. PATTERSON, of New Hampshire, U. S. Senator, "Influence of Education upon Labor."

THURSDAY, AUGUST 15.

At 9 o'clock, a Lecture by NATHANIEL T. ALLEN, of West Newton, Mass., "The System of Public Instruction in Prussia, as seen by a Massachusetts Practical Teacher."

Discussion.

At 10.30 o'clock, a Paper by E. C. PICKERING, Professor in the Institute of Technology, Boston, on "The Laboratory Method of Teaching Physics."

Discussion.

At 2 o'clock, a Lecture by Hon. E. E. WHITE, Columbus, Ohio, "The True Education."

At 3 o'clock, Discussion. Subject to be determined by the Association.

At 8 o'clock, Brief Addresses by prominent Educators.

ABNER J. PHIPPS, *President,*
WEST MEDFORD, MASS.

D. W. JONES, *Secretary,*
BOSTON, MASS.

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C. P. RUGG, New Bedford, Mass.

FORTY-THIRD ANNUAL MEETING
OF THE
American Institute of Instruction.

THE sessions of the Forty-third Annual Meeting of the American Institute of Instruction, were commenced in the hall of the Grammar School-house in Lewiston, Maine, on the evening of August 13, 1872, at 7.45.

The meeting was called to order by the PRESIDENT, ABNER J. PHIPPS, Esq., Assistant Secretary of the State Board of Education of Massachusetts, and was opened with prayer by Rev. Mr. FORD, of Lewiston.

The record of the proceedings of the last annual meeting was read by the Secretary, D. W. JONES, Esq., of Boston Highlands.

THE PRESIDENT then introduced Hon. M. T. LUDDEN, who, in behalf of the Mayor, he being absent from the City, and of the Chairman of the School Board, also unavoidably absent, extended a hearty welcome to the Institute. He took occasion to express his deep interest in the cause of education, and the labors of the American Institute of Instruction in particular, and the desire of the citizens to co-operate heartily with the members in their present deliberations, as well as to learn from them that which may be of great value to the schools of the City and the State.

PRESIDENT'S ADDRESS.

THE PRESIDENT responded as follows:—We are here, Mr. Representative of the City Government and of the School Board of the City, in compliance with an invitation,

very warmly extended, on the slightest intimation that an opportunity to hold a meeting of the Institute in this City would be acceptable, soon after our annual meeting at Fitchburg; and for that invitation, so cordially extended, in behalf of the Institute, I desire to extend our thanks. I thank you, sir, for the kind words of welcome that you have just uttered, and for the assurance that our presence among you gives you pleasure, and that your interest in the great object that has brought us together is in sympathy with our own.

We do not come to promote the interests of any social or benevolent organization, as do the many persons whose presence you have witnessed in your streets to-day; we do not come to promote the interests of any political organization, as will many others who will assemble here during the coming weeks; for politics are excluded from our deliberations. But we come to discuss, calmly, intelligently and profitably, I trust, the great educational problems of the day, the practical, living questions that occupy the thoughts of thinking men, questions which relate to the great interests of education throughout our land. We come to consider what has been done, what is doing, and what should be done to promote these great interests, than which none can be more important. We have come, sir, most of us, from a similar meeting in Massachusetts, in whose capital, sessions of the National Teachers' Association were held for several days last week. And the fact that those sessions were continued for several days, and that many of those who attended them came from a great distance, will, in part at least, account for the small attendance comparatively at this meeting.

You have alluded to this as being an American association. Such is its name. We have representatives here to-night, I see, from Washington, from Illinois, from Ohio, from New Jersey and from several other remote States, as well as from our own New England. And yet, it is not in its strict sense, I am sorry to say, an American association. It has been confined in a very great measure to the New England States, and it gives me pleasure, sir, to say that Massachusetts has

done nobly for this Institute. Indeed I would say here, and I take pleasure in saying, she has most generously contributed to maintain this Institute; we have for thirty-six, or more, successive years received an annual appropriation, amounting in the aggregate to \$13,000; and she is the only State that has contributed a cent for the interest of the Institute.

But I will not occupy time in giving expression to sentiments which might very naturally be expected on this occasion, but will again thank you, sir, and those whom you represent for the cordial hospitality extended to us, and would invite you to be present, and the citizens of your city, who are interested in the object for which we are convened, to attend our sessions and participate actively in our deliberations.

Gentlemen of the Institute: It is not my purpose to make any protracted remarks to you; having spoken of the objects of the Institute and what has been accomplished by it in the past, at the last annual meeting, I shall not dwell upon the subject, and indeed shall not make some remarks that I intended to make, owing to the peculiar circumstances under which we meet, from the inclement storm, most of you sitting with damp feet and damp clothing. I think, therefore, it would be inopportune for me to occupy any considerable time.

Certain matters of business were then referred to, and Hon. J. L. Pickard, Superintendent of the Schools of Chicago, was introduced as the speaker of the evening.

ADDRESS OF HON. J. L. PICKARD.

HON. J. L. PICKARD commenced by alluding to a remark of the President, that it might seem strange that no representative from Maine was found on the programme as a speaker during the exercises of the meeting, saying he thought he might himself be permitted to represent Maine. He thought a small portion of it belonged to him, since when a boy he had spent some years in cultivating its fields, and had traversed certain portions of it from morning to night, following the plow. Inasmuch, too, as it was in this city

that he received his early education, he thought he could claim some personal interest in the place, and perhaps the place would be willing to grant to him the privilege of representing it to-night. (Applause.)

MR. PICKARD then recounted in an interesting manner the events of his school-days, after an absence of more than thirty years. Among the recollections that came back to him with most freshness were those of his school-mates and early teachers. The characteristics of the latter were given somewhat in detail, as well as several incidents connected with his playfellows, and reference was made to a scar still borne upon his forehead, made by a wild, untamed boy who, at recess, undertook to show his power. Having given these and many other incidents in his school life here, he said that of the ten teachers whose instructions he thus received, for a longer or a shorter time, only one is still following the business of teaching as a profession, although, a majority of them he believes are living.

This brought him to the main topic which he wished to present; namely, *The Hindrances to making Teaching a Profession*. He said, of these ten men and women, nine have gone into other employment. Why? They were preparing themselves for the work of teaching in theology, or for practicing medicine, or for eligible marriage. Theology, medicine or marriage claimed their thoughts more than the school; and the fact is a sufficient answer to the question, where are they? Respectable and respected men and women in the departments in which they labor, men and women prominent in the spheres they have chosen for themselves, men and women that I loved as teachers, and who had unusual power as such, I think, yet slipping out of the work as teachers and taking other which they deemed better. Why? If I call your attention to some of the hindrances to making teaching a profession perhaps we shall not lose the time of the evening.

First, I mention one difficulty that we cannot control. A large majority of the teachers of this country are of the sex

that forbids their continuing teaching as a life work. Noble and earnest and faithful as these are as teachers, they are still noble and faithful and earnest as wives and mothers. And this fact, that a large majority of our teachers are females, is directly in the way of making teaching a profession. The few men who are employed, are constantly having their relative number diminished ; and the effort is continually made to secure places for women, that have been occupied by men. Women are doing the work well ; but they are encroaching upon our department of work. Their numbers are relatively increasing and will still increase. Where can we find the material, then, out of which to make a profession ?

Another hindrance in this direction is, the estimate put by society upon the historic school-master. Shakspeare gives us as a type of the school-master of his day, "a man who has gone to a feast of words and stolen the scraps." Shenstone describes one whom he knew, as anything but inviting in personal appearance, as anything but a pleasing sight to the children whom she taught. Dickens gives us Squeers as a type of the school-master, that barbarous old customer, who loved treacle so much, or molasses, who loved sulphur at certain seasons of the year so well, that every child must take it. Irving gives us as a sample of the teacher of his day one who was long, lean and lank, appearing, with his clothes hung loosely about him, as he went up and down in Sleepy Hollow, like a scarecrow. And so on all through, when we take the history of the school-masters and school-mistresses of the past, we find them satirized.

Now are these all historic? Are there not some actual school-masters who give color to these descriptions? Certainly, if not found in this neighborhood, you need not go far West to discover them. When traveling in Wisconsin on one occasion I stepped into a public school-room. I was attracted by the peculiar appearance of the master, who secured silence soon after I entered by stepping to the table and thumping upon it with a stout stick and shouting "dry up," here! (Laughter.) Very good advice perhaps; but he found

it necessary to repeat it half a dozen times during my short stay. Such things may not be found at the East; but similar indications of unfitness for teaching are not very uncommon in sections of the West that I have traversed. To the extent to which they are found, they act directly in the way of making school-teaching a professional work; for those who conduct their work in this slipshod manner, cannot expect to find permanent employment as teachers worthy of respect.

Then, again, the lack of conviction in ourselves that the work is a work worthy of our highest aim. Too many fail to remember that we are engaged in a work which lies at the foundation of every good thing in society and civil life, and at the basis of our government. How many feel, in their hearts, too little of the weight of conviction that should rest upon them as teachers. Some, it is true, carry with them an air of the school-master or school-mistress so far that, as was said by a child or pupil of one of this class, "She talks as if she was putting out words." Some show themselves to be school-masters or school-mistresses by their peculiar manners, and in nothing else. They are not school men and women of thorough purpose to make the work in which they are engaged include their whole life, and a work that shall show itself worthy to be made a life work.

Again, the fact that teachers have not the control of their own work, is something that stands directly in the way of making it a profession. Lawyers examine candidates for the bar, and they are licensed as such. And so in the other professions; but the poor school-teacher, by whom shall he be examined? Not by those of his own profession; not by those who know best what should enter into the composition and make-up of a school-master; but by some clergyman, who perhaps taught school for a little while, because he needed change—in his pocket—or by some physician, or other person, who taught school a short time because he could not find anything else to do that would give him money to aid in completing his education. But as a body, the teachers of the

United States are not examined, licensed or appointed by any persons who know the character and qualifications of teachers from actual experience. I look upon this as a matter to which we, as teachers, should give attention, and endeavor to control it; and, if possible, to secure a board of examiners who, from personal experience, shall be thoroughly acquainted with the wants of the schools, and what is required in the character of the school-master.

Then, again, teachers have no control in the matter of the appointment of teachers. Again, who ever heard of a College, in need of a professor in some department, coming down to the school-masters to find one? They go to the men rather who have been carrying saddle-bags, or to men in the clerical ranks, to find some one who has become prominent in his profession. Very rarely indeed do they come to the school-masters; and this is a fact that we shall do well to consider.

Then, there is not that degree of culture on the part of teachers, that general, generous culture, which those should secure who would have their work a professional one. There is a tendency to run in little narrow ruts, such as the teaching of spelling indifferently well, and to make a boast of that during life.

The inducements to secure popularity by clap-trap exercises, and other faults of teachers, were stated as barriers in the way of making teaching a profession, instead of laboring to make themselves wiser men and women, and thus make those who come under their influence feel that influence for good. The fact is, the better men and women we can make ourselves, the better hold shall we have on the community; and when we come to the point of making ourselves what we ought to be we shall have a solid foundation to build up a profession upon. (Applause.)

Some of the influences employed to secure the position of a teacher were briefly commented upon and condemned, illustrating one phase of this kind of means employed by the case of a young man who claimed a place on account of the fact that his father was the Honorable so and so. The com-

mittee man to whom he applied responded, "My dear sir, daddyism is at a discount here." (Laughter.)

The address was listened to with great interest, the foregoing sketch being only a brief outline of the whole, but presenting the principal points.

SECOND DAY.

WEDNESDAY, August 14, 1872.

The meeting was called to order by the President at 9 o'clock, A. M., and was opened with prayer by Rev. Mr. Haines of Lewiston.

The first exercise was the reading of a paper by Walter Smith, State Director of Art Education in Massachusetts, on "*Drawing in Graded Public Schools,—what to teach, and how to teach it.*" See page 121.

DISCUSSION.

THE PRESIDENT announced that the subject was open for discussion or questions, by any member of the Institute.

A member inquired how the drawing of a sphere could be taught, as the speaker recommended, before shading is taught.

MR. SMITH responded that the drawing from solid models should come in after the drawing in outline of the same objects; that is to say, before the scholar begins to draw from visible forms, every geometric, solid form has been previously drawn, as in drawing the cylinder, the model of drawing all the solids is given. The drawing of a sphere before the commencement of shading can, of course, only be done in the form of outline. There is little time, in the schools, for the pupils to spend in shading. My idea is that whenever the name of a form shall be given, the object should be presented at once. The kind of power given to shading, causes the loss of power to draw outlines. I would rather that a circle should be drawn simply as a circle, than that much time be

given to shading. Shading is of much less importance than outline drawing.

PROF. GREENE of Rhode Island. I do not rise, Mr. President, because I feel that I have any special mission on this subject, but to express the impressions I have of the great advantage of teaching drawing in the schools, and my appreciation of the method stated in the paper read. I trust the time is near when the subject of drawing in the public schools shall be regarded with as much interest as any taught in the schools. The times have changed in this respect. When I was a boy in school, it was regarded as an offence to make a picture on the slate or paper, and I have known many a boy receive disapprobation for having made a rude picture on the slate. All attempts at drawing were discouraged; but the change that has come in this respect is very great.

I rise to express my entire confidence in the statements made in respect to the progress which children may make. I never expect to draw anything that would be recognized, except an inscription were placed underneath. (Laughter.) But I know my children have learned to draw very well, from the circumstance that they commenced when quite young; and that without any lessons in the public schools or anywhere else. The fact is, there must be a beginning; a child must put his pencil to paper; and when, in his first attempt, he finds an inaccuracy, he finds success in perseverance. When the whole body of children give their attention to drawing, they will come up with the habit of representing in form their ideas or objects; and we shall have in our schools some who will have moderate attainments; some who will acquire power to draw very satisfactorily; and others will rise up and grow to excellence which will mark them as artists in our country. And I am delighted, I may say almost proud of the statements made in the lecture, that the children of our country are rising to be equal, if not superior, to the children in foreign countries, where drawing has been a matter of instruction so long in schools. I am profoundly impressed with the importance of this matter, and I wish to

state this, that the teachers may take an interest in drawing in both public and private schools.

MR. Z. RICHARDS of Washington rose as a witness in this good cause. Though not an artist, he appreciated the truths uttered in the paper. Some of the thoughts expressed lie at the foundation, not only of the art of drawing, but of the art of teaching; that drawing is not to be taught so much for the sake of drawing itself, as to be able to communicate knowledge. None need to understand drawing more than teachers. Reading and many other branches are taught in schools, not for the sake of reading in public, but for the purpose of giving ability to acquire knowledge, or apply it. Every teacher needs to understand drawing, so as to communicate ideas to pupils by that means. He was glad to agree that when objects are presented to the child the name is to be presented at the same time. It is not necessary that our children should be drilled from day to day, upon the useless and nonsensical words of our spelling books. Not more than one thousand words are fit to be taught to our children; fifteen hundred words are all that I want in my vocabulary. Let that number be thoroughly understood and they will be sufficient. I think that drawing lies at the foundation of success in the very first elements of teaching; and the teacher who does not understand it, is not qualified to perform the work of a teacher as he should.

PROF. TWEED of Charlestown never drew anything but a blank in a lottery; but he had been very much interested in the lecture, not merely on account of the value of drawing in itself, but for its educational value. We have been told that if drawing is imperfect it is because the conception is imperfect. I think that will apply to reading, as it may be imperfect, not because the voice is not good, not because the pupil may not know how to give the proper inflection or have all the arts of elocution, but because he has not a picture in his mind. If in reading a fine description he can make a picture, not on the black-board, but in his mind, then I think he will read well. It seems to me that drawing has, in this re-

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spect, an educational value, in that it aids the imagination or assists us in making pictures, pictures of thought, and in forming distinct conceptions. The relation between these two things is very intimate. It seems to me that if I cared nothing at all about drawing as such, I should still regard this as one of the most important and suggestive lectures I have heard on the general subject of education.

The President announced the following committees:

ON NOMINATIONS.—D. B. Hagar, Warren Johnson, W. A. Mowry, S. S. Greene, James S. Barrell, M. C. Stebbins, T. W. Valentine.

TEACHERS AND TEACHERS' PLACES.—A. P. Stone, Thomas Tash, E. B. Hale.

RESOLUTIONS.—Merrick Lyon, Z. Richards, C. C. Rounds.

NECROLOGY.—Charles Hammond, Edward H. Allen, S. S. Greene.

At eleven o'clock, a paper was read by J. Baxter Upham, M. D., Chairman of the Committee on Music, of the Boston School Board, on "*Vocal Music as a Branch of Instruction in our Common Schools.*" See page 161.

He was followed by L. W. Mason, a teacher of music in the Boston Primary Schools, who explained his method of teaching children, by a class of children from the schools of Lewiston.

The meeting then adjourned until two o'clock, P. M.

AFTERNOON SESSION.

At the opening of the afternoon session, Francis H. Underwood, Esq., of Boston, was introduced, who presented an essay, on the "*Teaching of English Literature.*" See page 186.

This was followed by a lecture by Rev. Dr. C. A. Bartol, of Boston,—"The Idea of Industrial Education."

DISCUSSION.

MR. RICHARDS of Washington spoke in favor of Kindergartens, and thought the kind of instruction given in them

should be continued through all the grades, up to the Polytechnic School. Now, when the children are put into the common schools they are treated like so many animals ; the whole process of education in them tends to prevent growth in reference to preparation for real life. In ninety-nine cases in a hundred the chief qualification of the teacher in those schools is, to keep the children still. A fine set of desks and polished walls, except there is hung upon them sometimes a map or chart, are the chief attractions in a primary school-room. He thought there should be an industrial room in connection with the common schools, with appropriate tools, so that boys and girls might be taught the use of appropriate instruments, which they will need to use in after life.

Permission was given Mr. Valentine of New York, who was obliged to take his leave, to present the following resolutions as a mark of respect to the memory of William Seaver, one of the founders of the Institute, who died during the past year, at the age of 80 years. The resolutions were referred to the Committee on Necrology.

Whereas, An All-Wise Providence has, since our last annual meeting, removed by death Mr. William Seaver, late of Northboro', Mass., who was for nearly fifty years a highly successful teacher in that town, in Quincy, and in Cambridge, Mass., and who, moreover, was one of the original members of this Institute, therefore,

Resolved, That in this event we are reminded not only of our own mortality, but of the fact that the pioneers in this enterprise are rapidly passing away.

Resolved, That while we will pay all honor and respect to the few yet remaining fathers and founders of the American Institute of Instruction, and will ever cherish the memory of the departed who labored so wisely and so well in their generation, we who succeed them will give all diligence to perpetuate and perfect their work, until this, the most ancient organization of the kind in the world, shall accomplish all that its founders sought.

MR. VALENTINE said he noticed the great interest manifested at the announcement of the death of Dr. Lowell Ma-

son. They all had a deep interest in him, and a great respect for his memory. He would himself have gladly walked ten miles to attend his funeral. But I wish to speak more particularly of Mr. Seaver, who was once well known to members of this Institute. He was a pioneer in this enterprise, though unknown to fame, having no titles, but simply an humble teacher.

I remember meeting with him many years ago, when this Institute met at Worcester. His age was nearly eighty; and I am certain that any person who ever taught school would have been interested in visiting him and hearing him recount his experiences. Like the old soldier of whom Goldsmith wrote, who "Shouldered his crutch and showed how fields were won," so Mr. Seaver told of his experiences. I find his name was the ninth on the record of original members of the Institute; and not one of those whose names precede his, is now living. I remember when he attended our meetings in the days of Wayland and Pierrepont. The fathers are passing away, and I feel that I am becoming one of the patriarchs. I believe that while we honor our revolutionary patriots and give them pensions, we should not forget the humble ones who led off in this great enterprise. If his name was not among the honored ones who held office, yet he did all that he could for the prosperity of this Institution.

The resolution was referred to the Committee on Obituaries.

On motion of A. P. Stone; the President, Secretary, and Treasurer were appointed a committee to consider the propriety of closing the present session of the Institute to-morrow at four o'clock.

The President announced that invitations had been extended to the members of the Institute to visit the Andros-coggin, Hill, and Bates Mills. These invitations were accepted, and the thanks of the Institute returned.

At quarter to five the Institute adjourned. The members immediately grouped themselves into three companies, each of which, under the gentlemanly escort of one of the citizens of Lewiston in attendance at the Institute, was con-

ducted to one of the spacious mills, where, by the courtesy of the superintendent, every opportunity was given to see the machinery and the several processes of manufacture.

EVENING SESSION.

The Institute met at 8 o'clock and was addressed by Hon. J. W. Patterson of New Hampshire, United States Senator. Subject, "*Influence of Education upon Labor.*" See page 90.

THIRD DAY.

THURSDAY, August 15, 1872.

The Institute was opened at 9 o'clock, A. M., with prayer by Rev. Mr. Burgess of Lewiston.

REPORT OF COMMITTEE ON NOMINATIONS.

The Committee on Nominations reported the following list of officers of the Institute for the ensuing year. The report was accepted and the persons nominated were elected by ballot.

OFFICERS OF AMERICAN INSTITUTE OF INSTRUCTION FOR 1872-3.

PRESIDENT.—M. C. STEBBINS, Springfield, Mass.

VICE PRESIDENTS.—William Russell, Lancaster, Mass.; Henry Barnard, Hartford, Conn.; Ariel Parish, New Haven, Conn.; George B. Emerson, Boston, Mass.; Daniel Leach, Providence, R. I.; Salmon Richards, Washington, D. C.; John W. Bulkley, Brooklyn, N. Y.; David N. Camp, New Britain, Conn.; John D. Philbrick, Boston, Mass.; Ebenezer Hervey, New Bedford, Mass.; Henry E. Sawyer, Middletown, Conn.; D. B. Hagar, Salem, Mass.; A. P. Stone, Portland, Me.; John Kneeland, Boston, Mass.; B. G. Northrop, New Haven, Conn.; T. W. Valentine, Brooklyn, N. Y.; Joseph White, Williamstown, Mass.; Charles Hammond, Monson, Mass.; Samuel S. Greene, Providence, R. I.; John W. Dickinson, Westfield, Mass.; Merrick Lyon, Providence, R. I.; Samuel W. Mason, Boston, Mass.; A. A. Miner, Boston, Mass.; Albert Harkness, Providence, R. I.; David Crosby, Nashua, N. H.; A. J. Phipps, West Medford, Mass.; George T. Littlefield,

Charlestown, Mass.; Elbridge Smith, Boston, Mass.; F. F. Barrows, Hartford, Conn.; A. G. Boyden, Bridgewater, Mass.; Warren Johnson, Augusta, Me.; James S. Barrell, Lewiston, Me.; William C. Collar, Boston Highlands, Mass.; C. O. Thompson, Worcester, Mass.; B. F. Tweed, Charlestown, Mass.; D. W. Jones, Boston, Mass.; Thomas Tash, Lewiston, Me.; C. C. Rounds, Farmington, Me.; E. B. Hale, Cambridge, Mass.; Thomas Emerson, Newton, Mass.; A. P. Marble, Worcester, Mass.; E. A. Hubbard, Springfield, Mass.

SECRETARY.—W. E. Eaton, Charlestown, Mass.

ASSISTANT SECRETARY.—Alfred Bunker, Boston, Mass.

TREASURER.—George A. Walton, Westfield, Mass.

COUNSELLORS.—J. C. Greenough, Providence, R. I.; George N. Bigelow, Brooklyn, N. Y.; M. G. Daniell, Boston Highlands, Mass.; W. A. Mowry, Providence, R. I.; N. A. Calkins, New York City; J. W. Webster, Boston, Mass.; J. N. Camp, Burlington, Vt.; T. W. Bicknell, Providence, R. I.; J. G. Edgerly, Manchester, N. H.; A. E. Winship, Bridgewater, Mass.; C. P. Rugg, New Bedford, Mass.; E. I. Comins, Worcester, Mass.

Voted, To close this session at four o'clock this afternoon.

The annual report of the Directors was presented and placed on file. By this report it appears that the Committee on Publication has published three hundred copies of the annual volume, at an expense of three hundred and twenty-nine dollars and eighty-one cents. One hundred and seventy copies of the volumes have been sent to members of the Institute entitled to them. The library of the Institute remains at the rooms of the Massachusetts Teachers' Association in Boston, and in good condition.

The report of the Treasurer was received and placed on file. The report shows that the Treasurer has received, the past year, eight hundred and ninety-one dollars and ninety-seven cents; paid out eight hundred and sixty-two dollars and ninety-four cents. Balance, twenty-nine dollars and three cents. Money in treasury, two hundred and fifty dollars. Total balance in favor of the Institute, two hundred and seventy-nine dollars and three cents.

The Committee on Necrology reported the following resolutions, which were unanimously adopted:

RESOLUTIONS.

Whereas God in his Providence has, during the past year, removed by death Rev. Charles Brooks, of Medford, Mass.; Rev. Cyrus A. Crane, D. D., of East Greenwich, R. I.; William Seaver, of Northboro', Mass.; Albert A. Gamwell, of Providence, R. I.; and Dr. Lowell Mason, of Orange, N. Y.;

Resolved, That we sincerely cherish the memory of these our departed associates, for their constant devotion to the interests and objects of this Association, of which they were early members and founders; for their personal example of wisdom, fidelity, and patience in their endeavors to promote the cause of popular education, and for the abundant success in their special departments of personal service by which they obtained the most honorable distinction as educators, and became the benefactors of the generation in which they lived.

MR. HAMMOND said:—*Mr. President*, I have but a few words to say in reference to the persons who are the subjects of these resolutions. I cannot say that I was personally acquainted with most of the persons alluded to, or that I am particularly acquainted with their biography. But we all knew some of them through their extended reputation. The name of Lowell Mason is prominent in the educational history of this country. I remember distinctly the impression produced by an address which I heard him give at New Haven, I think some twenty-seven years ago, when he was in the midst of his popularity, attracting the attention of teachers to music, and when he was specially engaged in popularizing sacred music, which was his great work.

I think it is not claimed for Dr. Mason that he was one of the most eminent musicians of his time, but it can be claimed that he was one of the most celebrated teachers, and more than this, that he interested the public at large in a new style of musical composition. He was known as a composer, and his tunes are sung in every Christian congregation

of every denomination. He was distinguished, as I understand, as what might be called a translator of music, bringing to the knowledge of the educators of this country the best compositions in his particular department, to be found in Europe. He introduced that class of tunes so popular, and which were published by the Boston Academy under the title of Gregorian Chants, such tunes as Hamburg, Olmutz, etc., which are really a thousand years old, taken from the music used in the Catholic church, and made over into English tunes.

One thing more in regard to Mr. Mason, which shows his diligence as an instructor and teacher, eminent in sacred music in the same way that Professor Silliman was in the study of chemistry; beginning in the same way, when a popular taste in regard to a sensible style of music had to be created. One thing that shows his zeal in this matter, is the splendid private library of musical works which he collected. I had an opportunity of seeing this twenty years ago, and there was not then any work published in this country that he did not possess.

PROF. GREENE of Providence. I rise to second the passage of the resolutions. I had the pleasure of being personally acquainted with several of the gentlemen whose names are included as subjects of the resolutions, and who have passed away from us; especially with Dr. Mason, of whom I desire to speak more at length. I do not intend to give any extended history of his career, but to present some things in the history of his life, and the particular circumstances under which he developed the subject of sacred music, in this country.

The first time I ever saw Lowell Mason was in Boston, in 1831, I think. I had heard of his name in connection with the Boston Academy of Music. I then attended an exercise to which he invited the public, and at which he presented a choir of children,—a novelty at that period. I was delighted and amazed at the success with which he had developed the musical talent of those children. They were arranged in the gallery of the church where he was the Musical Director, ar-

ranged all around the gallery, forming a complete rectangle, and he presided at the organ. One of the pieces, I recollect, was the "Pretty, Pretty Pear Tree;" and the children sang it with great skill, some parts in solo, and the audience were delighted.

Having been acquainted with him since, I can give some of the incidents of his life. He was born in Medfield, Massachusetts, and at the time of his death was a little more than eighty years old. He was very fond of music as a boy and young man, and played the violin. He went to Boston and was encouraged somewhat there; and finally went to Savannah, Georgia. It was there that he devoted himself especially to the subject of church music, and developed a strong taste for music in a large choir, cultivated to such an extent that they became a wonder in that part of the country. At length he was invited to come to Boston, being assured by several clergymen there that he should have a salary greater than he was receiving in Savannah. He came there in 1827, or 1828, I think. He commenced with teaching children, and it was there that he became acquainted with Dr. Woodbridge, who understood the German language, and who told Mr. Mason something about the methods of teaching music in Germany. Dr. Woodbridge translated a little German work, which was instantly introduced into the choirs of children. Dr. Mason devoted himself especially to teaching children music on a new plan, and here is where he did the most for music and for education in this country.

Having obtained from this little translation, his knowledge of the German or Pestalozzian method, he commenced giving instruction upon this new method. Some present may not know anything about the old method. This method was briefly explained, how the rules and gamut of music was first learned so as to be recited to the teacher; then the voices of all were tried to see if they could sound the "eight notes;" and if they did this tolerably well they passed; if not, they were set upon the side seats. It was believed that there was a select few who could sing—I do not know whether se-

lected from all eternity or not—and the rest were set apart as not being able to sing. But Dr. Mason changed all that, and said the true method was to set the children to singing, giving them the simplest music possible. I give this as the key to the whole of Dr. Mason's life, in the department of music. He demonstrated the power of children to sing, and introduced sacred music into the public schools, which was the grandest thing of his life. Before that, no such thing was allowed.

I remember that after Dr. Mason had succeeded in introducing music into the schools of Boston, other cities soon adopted the practice, and when I went to Hartford to teach school, I found that all the children were taught to sing. It was delightful practice, as the masters had all fallen in with it and were greatly pleased with it.

When Dr. Mason first tried to introduce singing into the schools of Boston, he was met with a refusal to permit him to do it; but he worked upon them and labored with them as Dr. Mason only could; and any one who knew his tact and power would know how he succeeded in this work. He proposed that he would go in without pay if they would allow him to try it; and in this way he succeeded in exciting a great deal of interest, and finally the School Committee paid him a salary, and he went in as Director of Music in the Boston schools, and this grew to be considered a special department of instruction.

Then he began to publish books, and upon the German plan; and he was afterwards called upon to go to Providence, New York, and almost every large city in the Union, to lecture and exhibit his methods of teaching music to people generally; and this is the way that Dr. Mason became so widely known in this country as a leader, especially in church music. He then began to compose, or as has been well said by Mr. Hammond, he became the translator of the old mediæval music of Europe. Thus he prepared books for social gatherings, for glee clubs, and sacred music, making him known as an author. He came forward to meet a necessity,

and he did meet it most nobly; and we all know that his style of teaching is the prevailing one to-day. He did not claim any originality, but called it the Pestalozzian method. He thus became famous, going before teachers to exhibit his methods, having the wisdom and skill to show them how these methods could be applied as well to geography, arithmetic or other studies, and thus did much to disseminate better methods of teaching in all departments. And he had the privilege and pleasure of knowing that his work had been eminently successful throughout the country, and he was the first person honored by the degree of Doctor of Music. He deserved it, and has been known from that time as Dr. Mason.

Such a man must be a man of commanding energy, and with this there was a generosity which ennobled him, inducing him to go before the public and work, with pay or without it. He often received letters asking him to go to certain places, in which it would be said: "We have little to offer you." The Doctor would reply: "I shall come, give me all you can, the more the better, for it will do you good." And he was there and worked just as hard whether he received anything or not.

But he was finally successful in his personal labors, and obtained an ample fortune. He was rewarded for his works, as very few of us are who are engaged in education. He was also a religious man; he was a man whose life showed his religious tastes. He did not hesitate anywhere and everywhere, before all classes of people, to present the service of song as part of the service of God. He was eminently catholic in his religious feeling. It made no difference where he went; he believed in God and in worshipping God by prayer and singing; he was earnestly in favor of the whole of it in private and in public.

The last time I ever saw him was on his return from the meeting of the National Association at Harrisburg. He invited me to stop with him, and I had a most delightful interview with him. He was full of anecdote, full of experience, which a man who had lived such a life would have; and he

was full of religious sentiment not dogmatic or fanatical. He said: "I am getting to be old, I shall soon die; I expect to die." This he said, not with a kind of cant nor with more seriousness, perhaps, than would be natural in ordinary conversation; but he said: "I expect to die; I cannot realize it. I have tried to do so many times; I believe in God; I believe what He has said, and I give myself up in faith to Him." That is a specimen of the way in which he spoke of such matters. He continued in service until over seventy years of age. From that time onward he retired into private life and led a quiet life in his most delightful home in Orange, New Jersey; and there he died. I am aware that I have given an imperfect sketch of Dr. Mason; but I should do injustice to his memory and the great work he did in the cause of education, to say less.

MERRICK LYON, of Providence. I desire to utter but a few words in regard to the second person named in those obituary resolutions. I wish to speak of the Rev. Cyrus A. Crane, who joined this Institute at the meeting in Providence in 1854. I have known him intimately for many years; and when he died, his name was recorded with my own upon a committee where we had served fifteen years. He graduated at Brown University with high honor, became a teacher in Providence, and, during the greater part of his life, continued to receive and instruct pupils. He was settled at East Greenwich, and was there a faithful and loved pastor. He was a man of a genial and Christian spirit, and a lover of good learning in all its departments, an elegant classical scholar, who kept up with his classical studies to the last; and every year he made it a point, on the examination in Brown University, to be present, and he prepared himself especially that he might question the students, that he might, as he himself said, kindle the flame in his own heart and retain his familiarity with the classics, to which he had devoted so great a part of his life.

As a teacher, he was eminently successful; as a preacher, he was able, and in all his duties and relations in life, he

filled them well ; and we in Providence, and in Rhode Island, feel that we have lost a noble, generous and high-minded man, whom no one knew but loved him, nor named him but to praise.

. WILLIAM A. MOWRY of Rhode Island. *Mr. President*, I am aware that the pressure of other duties, forbids our dwelling on these matters of the past as, in one sense, we ought to do. This Institute was organized, and has been kept up and constantly and largely maintained, by practical teachers, and by teachers of public schools. Two of the gentlemen who have died during the past years, members of this Institute, have labored outside, higher in one very important sense, than that of the practical teacher of the common school. Dr. Mason's name stands high; Dr. Crane's name is also distinguished as a scholar, as a teacher, as a Christian gentleman. Let me occupy a single moment in stating one or two facts in regard to one of the members of this Institute for many years, whose name is among those of the earlier members, who was a practical teacher in the common schools, Albert A. Gamwell, a native of Western Massachusetts, a poor boy, brought up to hard labor upon the farm, earning his way and securing an education, and then graduating at Brown University with honor, and sitting right down to his life work as soon as he graduated, in one of the grammar schools of the city of Providence, unambitious of distinction or preferment; never speaking in these meetings except he was pressed forward; a scholar, a thinker, remarkably interested in our native language and all the studies that appertain to it; not an unapt scholar in the classics, but believing ours to be a classical language, of great power and force, and one that will richly repay us for greater study than we are accustomed to bestow upon it; tracing out the words to the springs from which they flow in the mountains of the past. He always had something to say, however, when he did rise, that teachers would remember and carry home with them.

I will mention especially that he spent his life in one place.

Had he lived to complete the summer term now past, he would have been twenty-five years the master of what is now the largest grammar school in that city. Nearly the whole of that time he spent in one building, organizing and re-organizing that school on a new basis, introducing teachers that we had never known before ; and there, for that twenty-five years, sustaining himself, lifting himself higher and higher every year by honest, manly, faithful work, so that at the last, the scene at his funeral was one of the most touching that my eyes ever witnessed, the business men, the young men from the first rank in business, coming up to the old Baptist meeting-house, established by Roger Williams himself, and shedding tears over the remains of their old teacher.

He left a record as a teacher, the memory of which will be cherished by the city and the State and by many persons scattered throughout our land. The great power of his life, which enabled him to accomplish what he did, was honest integrity, a feeling of responsibility to God to do all that he could do, and in the very best possible manner.

The next exercise was a lecture by Nathaniel T. Allen, on "*The System of Public Instruction in Prussia, as seen by a Massachusetts Practical Teacher.*" See page 39.

PROF. E. C. PICKERING, of the Institute of Technology at Boston, gave an instructive address in which he urged the importance of adopting modes of teaching that require the pupils to perform experiments. He would advocate the use of cheap instruments, many of which could be made by the pupils themselves. Samples of apparatus constructed by students at the Institute of Technology, were exhibited. The address was listened to with much interest.

AFTERNOON SESSION.

The Institute met at 2 o'clock, and listened to a lecture by Hon. E. E. WHITE, Columbus, Ohio; subject, "*The True Education.*" See page 69.

The Committee then reported and the Institute unanimously adopted the following:

RESOLUTIONS.

Resolved, That we return our sincere thanks to the School Board and City Government of Lewiston for their cordial welcome, and for the free use of the halls in which our sessions have been held; to the Local Committee for their untiring efforts to provide for our accommodation, and to make our meeting pleasant and profitable; to the officers of such railroads as have granted free return tickets to the members of the Institute; to the proprietors of such hotels as have furnished entertainment at a reduced price; to the Androscoggin, Bates, and Hill Companies for their invitations to visit their manufactorys; to the Reverends Messrs. F. F. Ford, E. M. Haynes, and J. S. Burgess for their very acceptable services; to J. L. Pickard, Esq.; Walter Smith, Esq.; J. Baxter Upham, M. D.; Francis H. Underwood, Esq.; Rev. Dr. C. A. Bartol; Hon. J. W. Patterson; Nathaniel T. Allen, Esq.; Prof. E. C. Pickering, Hon. E. E. White, and Prof. L. W. Mason, for their able and instructive papers, lectures and addresses; and that copies of the same be requested for publication; to Abner J. Phipps, Esq., for the efficient and impartial manner in which he has presided over our deliberations and performed the arduous and delicate duties of his office as President; to D. W. Jones, Esq., for his accurate, faithful and laborious services as Secretary.

Resolved, That our thanks are due, and are hereby presented, to the Legislature of Massachusetts for the continuance of their liberal appropriations in aid of the Institute.

ADDRESSES.

At this point, it being after three o'clock, P. M., the President called on several gentlemen from different sections, to make brief statements as to the condition and progress of education in their respective States.

MR. A. P. STONE, for Maine, who said that the schools of Maine were much like Jeremiah's figs, some good, some bad. Considerable progress has been made within a few years, in the way of legislation. He expressed his regret that so small

a number of the teachers of Maine had been present at these meetings, and explained the fact by saying that they were not generally informed that the meeting was to be held at this time, as the programmes had been so recently advertised.

REV. C. HAMMOND, of Monson, spoke of the schools of Massachusetts, as prosperous; and continued by expressing his gratification at the sentiments of the lecture by Mr. White, and that the right views were implanted in the West, where they will take deep root and bear much fruit. He added also a word with reference to Lowell Mason, in relation to his connection with this Institute as a means of good to the world. This Institute was established just before Dr. Mason began his work, and when he was ready to begin he found men in New England ready to help him. And there is just as much need of this Institute now, as there ever has been in the last forty years. It is an advantage to Massachusetts to pay all its expenses. It has a greater advantage in paying the whole than she could derive from the same amount expended in any other way. "There is that withholdeth more than is meet, and it tendeth to poverty."

MR. WILLIAM A. MOWRY spoke for Rhode Island, referring especially to the work in Providence, where they expect to build one good school-house, at least, every year. The State is making cotton cloth enough, every year, to make a belt three times around the world, and jewelry enough for "all the world, and the rest of mankind," if they do not wear more than they ought to. There are some very good schools in the State, and education is making progress.

DR. LAMBERT spoke briefly for New York, MR. GROSS for New Jersey, and MR. PICKARD for Illinois, confining his remarks, however, to the details of the fire and its results. There are now as many pupils, within one thousand, in the schools of that city as there were last September. Although the loss was very great, and the suffering of many very severe, yet there were lessons of benevolence and charity taught by it that go far to compensate for all.

The PRESIDENT elect, M. C. STEBBINS of Springfield, was

then conducted to the chair by Mr. Hagar. He said: *Ladies and gentlemen of the Institute, I am not insensible, indeed I am gratefully sensible of the high honor which you have condescended to bestow upon me, in placing me as a link in the long chain of illustrious worthies who have gone before in enjoying the privilege of presiding over the deliberations of this noble body.*

The history of this Institute is one of which we as educators may well be proud. There is no time now to be occupied in speaking of purposes and plans for the future, but I trust that by the co-operation of this noble body of experienced educators, with whom it is my privilege to be here associated, we shall be able to hold secure this growth of forty years, the result of which is an association which bears, in the traces of its history, much of the best work that has been done in the cause of education in our whole country; and when the history of education shall be written, there will be, in its annals, the biography of men whose names stand recorded on the lists of this Association.

I hope we may continue this good work, looking forward to a semi-centennial celebration not far distant, that will draw together such a body of teachers as shall worthily commemorate its labors of fifty years.

I therefore gratefully accept the honor which you have been pleased to bestow upon me, and will do all I can during the coming twelve months—recognizing this fact that it is a twelve months' work to prepare for an annual meeting—to make our meeting of the coming year one of the best in the history of the Institute. (Applause.)

The Institute then adjourned *sine die* by singing the Doxology.

CONSTITUTION
OF THE
American Institute of Instruction.

[THE following Constitution was recommended by the Board of Directors as a substitute for the old one, and was unanimously adopted at the annual meeting in August, 1870.]

PREAMBLE. . .

We whose names are hereunto subjoined, pledging our zealous efforts to promote the cause of popular education, agree to adopt the following Constitution.

ARTICLE I.

NAME AND OBJECT.

1. The Society shall be known by the title of the American Institute of Instruction.

ARTICLE II.

MEMBERS.

1. Any person of good moral character, interested in the subject of education, may become a member of this Institute by signing this Constitution, and paying a fee of one dollar.
2. Honorary members may be elected by the Institute, on recommendation of two-thirds of the Directors present, at any stated meeting of the Board.

ARTICLE III.

MEETINGS.

1. The Annual Meeting of the Institute shall be held at such time and place as the Board of Directors shall appoint.
2. Special Meetings may be called by the Directors.
3. Due notice of the meetings of the Institute shall be given in the public journals.

ARTICLE IV.

OFFICERS.

1. The officers of the Institute shall be a President, Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer, and twelve Counsellors; all of whom shall constitute a Board of Directors.
2. The officers shall be elected annually by ballot, and shall continue in office till their successors shall be chosen.

ARTICLE V.

DUTIES OF OFFICERS.

1. The Secretary shall notify all meetings of the Institute and of the Board of Directors; and he shall keep a record of their transactions.
2. The Treasurer shall collect and receive all moneys of the Institute, and shall render an accurate statement of all his receipts and payments, annually, and whenever called upon by the Board of Directors, to whom he shall give such bonds for the faithful performance of his duty, as they shall require. He shall make no payment, except by order of the Finance Committee of the Board.
3. The Board of Directors shall devise and carry into execution such measures as may promote the general interests of the Institute; shall have charge of the property of the Institute; shall be authorized to publish its proceedings, and such papers relating to education as may seem to them desirable.

They shall have power to fill all vacancies in their Board, from members of the Institute, and make By-Laws for its government.

4. Stated Meetings of the Board shall be held on the first Saturday of January, and on the first day of the annual meeting of the Institute.

ARTICLE VI.

BY-LAWS AND AMENDMENTS.

1. By-Laws not repugnant to this Constitution may be adopted at any regular meeting.

2. This Constitution may be altered or amended by a vote of two-thirds of the members present at the annual meeting, provided two-thirds of the Directors present at a stated meeting, shall agree to recommend the proposed alteration or amendment.

By-Laws.

1. At all meetings of the Board of Directors, seven members shall be necessary to constitute a quorum to do business.
2. The Board of Directors shall annually choose a Committee of Finance, whose duty it shall be to audit the accounts of the Treasurer, and, under control of the Board of Directors, to draw orders on the Treasurer for the payment of charges against the Institute.
3. It shall be the duty of the Secretary, on application of any two Directors, to call special meetings of the Board at such time and place as the President may appoint.
4. The Board of Directors shall be empowered at any stated meeting, to vote an annual assessment upon the members of the Institute, and all persons paying the assessment shall be entitled to a copy of the proceedings for that year.

Public Education in Germany.

BY NATHANIEL T. ALLEN.

THE opportunities afforded me in the character of Agent of the Department of Education at Washington, have been unlimited. It would have been quite impossible to gain admittance to many Educational Institutions simply as a private citizen of the United States,—as a teacher, or even as an agent of a City or State government.

Through my friend, Hon. Henry Barnard, late United States Commissioner of Public Instruction, also through the present able Commissioner, General John Eaton, I was furnished with credentials, and was at all times, and in all places, throughout Germany, treated with the greatest courtesy, and every facility was granted to examine, see and hear for myself.*

* It affords me great pleasure to acknowledge my deep indebtedness to Mr. Privy Counsellor of Government, Dr. Wiese, Prof. Dr. Fr. Von Holtzendorff and Baroness Marenholtz Bulow of Berlin, Profs. Drs. H. A. Manitius and Fr. Krause of Dresden, and especially to Prof. Dr. J. W. Schinn of Wiesbaden, and others for their invaluable aid in making these investigations.

If these facts and experiences, with such criticisms and suggestions as I may make, can in any way serve the cause of education, my object will be attained.

The system, usually denominated Prussian, cannot be justly so called, for I found an equally perfect system, and not copied from the Prussian, in Saxony, Nassau, and in other parts of Germany; in fact, in certain particulars, those of the two mentioned are superior to that of Prussia, as is claimed by their teachers and professors, and shown by the smaller percentage of illiteracy in Saxony and Nassau, than in Prussia.

At the public examinations for entrance to the University and Military School in Berlin, it was shown that the students from Saxony were intellectually superior to those of Prussia, as I was informed by one of the Professors in the Berlin Military Academy. This shows that not only are their systems more universally applied, but carried out with greater efficiency. I am confident that in Saxe Weimer, Hamburg, Baden, and other portions of Germany, the systems are equally good; as a whole, therefore, I call it the "*German System.*" As it is from this German System of Public Instruction, we of the United States can derive most information and advantage, and being more familiar with it from a year's observation and study than with that of any other in Europe, I propose to consider it under the several heads of,—

I. *Consideration of the System itself.* II. *Names of the different grades of school, included in the sys-*

tem, with the special work assigned them, as seen in their study-plan, etc. III. *Schools for Girls*,—followed by such IV. *Criticisms and Suggestions* as the limited time will allow, omitting other important matters of consideration connected with the subject, such as, *School buildings, furniture, apparatus, textbooks, etc*;—*the Teacher's profession, character, preparation and social position*;—*Character and quality of the instruction given and manner of imparting it*;—*Examinations, how conducted*;—*Discipline of the schools, how enforced, etc.*

A word upon the general character of the system.

It seems to me absolutely indispensable that an American, before considering this system in detail, and in order to understand and appreciate it at its true value, should fully comprehend the condition of the people, form and spirit of the Government in Germany, etc., as compared with our own.

The idea pervading the minds of those Germans who originated, as also those who persist in retaining the system unmodified in Prussia, is irreconcilably antagonistic with the thought of Horace Mann, and those kindred spirits in our country, who have labored, and are now laboring so nobly to develope and establish a system of public instruction which shall elevate and ennable all our youth, so that they may become intelligent, virtuous, freedom-loving citizens, from whom all power in government emanates.

In Germany all power and even liberty to express thought is vested in the Sovereign, nor is this idea a “glittering generality,” but absolute

fact and carried into practice to an alarming extent to-day.

The Sovereign looks upon the people as his children, to be cared for, trained, and provided with employments, which shall, while ministering to their general comfort, at the same time add to his own aggrandizement. He therefore presents the problem to his Minister of Education, viz:—"Considering the whole population as one family of children, with no free adults as in the United States, but as young and old children and wards, to arrange a system of schools for, and studies adapted to develope these creatures of mine, so that they may be the best prepared to fill each of the various positions and avocations in the great family or community assigned them."

The design of the Government of Germany is, so to economize all the active talent and ability of its citizens, that every department in the body politic shall be filled not only with men specially trained and educated for it, but by those having natural gifts and talents therefor; and, with the absolute form of government, they are able to carry this into execution.

So searching and all-embracing is this system of *Government Instruction*, that when any lad in either of the different classes of school, especially the three lower, gives evidence of possessing marked talent in any particular department of science, literature or the fine arts, he is reported to the proper authorities, when arrangements are generally made by which he is encouraged to develope his special gifts, thus en-

abling him to benefit himself, his country and perhaps the world, to a greater extent than would have been possible if left to his own or parents' guidance. This is accomplished by means of a system well adapted to its purpose and with special reference to the fact that none of these children are ever to come into possession of manhood as we understand true manhood to be, with its broad and intelligent freedom restrained only by those laws of their country which are in accordance with the laws of God. It is by bearing constantly in mind the radical difference underlying the systems adapted to perpetuate the free democratic of the United States and the despotic government of Prussia and now of Germany, that we can understand and appreciate the German system as compared with what we desire for ourselves—for they are simply and purely *Government schools*, not public or common as we understand those terms.

When, in the sixteenth century, Luther inaugurated and laid the foundation of this system, also at the beginning of the present century, 1818 and 19, when it was more thoroughly developed and put in successful operation, the German principalities were even far more despotic in their character than now, while at present they are so, to a very burdensome extent.

It is not my intention to give more than a general statement concerning the principles underlying the whole, from which the very complex system has been developed, written out and put in practice with

wonderful exactness. I think it quite impossible for any government, save one of absolute power, or one of high intelligence and moral worth, to inaugurate and carry into execution such an all-embracing system.

Massachusetts is probably ready, under the inspiration and lead of a second Horace Mann, to accept an equally thorough course and plan of education, yet I am sure the intelligence and free thought of her people would reject much which is objectionable in the German, and which men of advanced thought in Germany are anxiously striving to expunge from their system. In illustration of this, I will read an extract from the circular of the International Congress of Education (Frankfort, 1869):

"To realize the idea which is the moving principle of the country, of political and social reform, according to the spirit of the age, nothing is more pressing than a reform in popular education. In spite of the high development of schools as a means of *instruction*, educational systems in general are very far from being able to answer the demand of our age. Particularly they are not fitted to give that firm, moral base and the development of that strength of character which all true and great nationality requires, and without which the real dignity of man is not possible."

I believe we are to have in the United States, a system of public instruction in no respect inferior, and in many features *superior* to any which is possible in a community less nobly free than our own; nor can it be otherwise, for, with the Germans, the

school buildings are erected ; teachers selected, employed and paid ; text-books, course of study, etc., decided upon without the least reference to the parents or their representatives. Undoubtedly this is, in a great degree, perhaps wholly, due to the despotic form of government under which they live, which arrogates to itself the complete and unlimited control of every part of the machinery of society, political, social, religious or educational. Any interference in the above matters is considered an assumption on the part of a citizen, so outrageous that none have the temerity to attempt it. This statement is, in justice, due to the German parents, for, in all matters touching the education of their children where their influence can be felt, I am sure the unselfish devotion to the interests of their children is not excelled by parents in any part of the world. With us each intelligent parent feels a direct interest and responsibility in the schools, as evidenced in carefully selecting and voting for the persons, generally of high character, under whose control the schools are to be placed, and in appropriations, so liberal, for their support. In Germany a parent is not invited or allowed to visit the schools where his children are, even at annual examinations and inspections. I have been present day after day for weeks, without the presence of a single parent, while in our best schools and communities their personal interest is shown by numerous visits which are considered mutually beneficial with pupils, teachers and parents. With these preliminary remarks, I

proceed with the names of the different classes or grades of schools included in the system, with the special work assigned them as seen in their study-plan, and which constitutes each a complete and graded school in itself, into which pupils enter and remain during their whole school life.

(1.) *The Dorf Schule* or *Village School* of the country, and the *Burger Schule* or *Citizens' School* of the city, are for the children of peasants, humbler workmen and mechanics, and the course of study prescribed for these is quite similar; *thorough*, though not extended, but well-fitted for those whose future condition must, with rare exception, be the same as their parents. In these the common branches are taught as with us, nor is it possible for children to pass through the seven or eight years of school life, entering as they do at seven years of age and continuing till fourteen, at least till *confirmation*, without attaining a very fair degree of proficiency in the branches of reading, writing, arithmetic, geography, and history, with some branches of natural science and singing, also the Lutheran catechism pretty thoroughly memorized, and which occupies much of their time during the whole school course.

The *Zolkschulen*, or *People's Schools*, of the cities and larger towns, are for the children of the lowest and poorest classes of artisans, day-laborers, servants, etc. In these Zolkschulen the tuition is usually free, the only *non-tuition* paying schools, therefore they are often termed *pauper-schools*, the parents of these children being too poor to pay any tuition. Two

years ago the lower grades of Burger schools were made free in Berlin.

The course and extent of the study-plan in this class of schools, is limited, but such as is designed to qualify all the pupils in the common elementary branches that they may discharge the duties of their menial employments with fair intelligence.

The following is the study-plan. The first year in school, the pupils study poetry, etc., committed to memory, writing, reading, and arithmetic, and are instructed in religion. The second year penmanship and practice in conversation are added; the third year Bible history, geography, and natural science.

In the remaining four years the full course is, education in religion, Bible history, reading and conversation, penmanship, arithmetic, geography, history, natural history, and singing, to which is often added instruction and practice in various hand-works—basket-making, mat-platting, etc., for the boys, plain sewing, cutting out, etc., for the girls.

During the first three or four years of school life, the sexes are taught together in these schools. When convenient and economical, they are then separated and taught by themselves, as is invariably the case in cities and large towns. In the smaller country villages where the population is sparse, boys and girls are taught together during the whole course. Thus it is seen that the course of study prescribed for the schools where the children of the poorer classes attend, is by no means

extended, but sufficient to qualify them for the discharge of their various duties pertaining to the humbler spheres in life which they are sure to occupy. It is claimed that to extend the course in these schools would prove injurious to the class of youth who attend them, by stimulating ambition and exciting desires which, while it is impossible for them to realize, serve only to cause discontent with their lot, and consequent loss of time. It is not my purpose to discuss the theory above stated at this time, though as much can be said in favor of, as in opposition to the same.

Probably four-fifths of the German immigrants in our own country are graduates from the Dorf or Burger Schule. As before stated, the Burger Schule are of several grades, some of the highest of which, as in Berlin, Nassau, and Heidelberg, I found of a superior character to any of our Grammar, and ranking with our common English High School.

Next in the ascending order or class of Schools is the *Real*. These are of first, second, and third grades, to meet the demands of a more or less intelligent community, and are designed for the sons of all those who can afford the expense of tuition—thirty to thirty-five *thaler*—twenty-one to twenty-five dollars per annum, and who also wish them thoroughly taught in all the branches usually included in a broad course of school education preparatory to entering the commercial, mercantile, mechanical or other pursuits, the great proportion of whom continue their studies no further than is attained in these schools during

the years from seven to fifteen or sixteen years of age. While many leave at fourteen and immediately after confirmation, to complete the full course in their study-plan requires till the eighteenth year of diligent application. It is mainly from these schools those graduate, who, after finishing the entire course, enter the higher professional and scientific schools, agricultural, commercial, teachers' seminaries, technic, polytechnic, etc., being admirably prepared in these noble schools which correspond to the best English High School, though their study-plan is somewhat more extended, embracing the English and French as well as the Latin languages.

I will give a synopsis of the full course in one of the best schools of this class which I visited, and which probably has few equal to it in Germany—the Frederic William Real School, Berlin, under the direction of Prof. Dr. Ranke, brother of the historian Ranke. There are six hundred and thirty students connected with it, ranging from seven to eighteen years of age. Its study-plan is :

I. *In Language.* (a) *German*, reading, spelling, writing, its grammar, history and literature most thoroughly.

(b) *French*, from the second year and through the entire course. This prominence given the French is due (1) to the systematic construction of the language, thus forming an excellent mental drill for the student, and (2) to the *prestige* of everything French throughout Continental Europe.

(c) *English*, from the fourth year through the course.

(d) *Latin*, from the first year through the entire course.

It is thus seen that every graduate from these schools has a very thorough knowledge of four languages, reading, writing and conversing in either with fluency.

II. *Mathematics*. A thorough course, continuing through the entire eight or ten years and which is quite extended.

III. *Geography and History*. These branches are usually combined and are taught in an interesting as well as thorough manner through the entire course.

IV. *Natural History*. Also a thorough and extended course continuing from the first to the year previous to graduating.

V. *Physics and Chemistry*, during the last three years, with experiments in the laboratory the last year.

VI. *Mechanics*, the last year.

VII. *Drawing*, most systematically through the whole eight or ten years.

VIII. *Religion*, with such attention and thoroughness the first seven years, and till confirmation, that Luther or even Calvin would be perfectly satisfied.

IX. *Singing*, continued through the entire course.

X. *Turning or Gymnastics*. These are the variety termed *heavy gymnastics*, and are continued throughout the whole course.

The pupils have thirty-two recitations of fifty minutes each, each week during the first school year

during the second year thirty-three recitations per week, the third thirty-four, during the fourth thirty-two, and during all the remaining years thirty-two, until the last year, thirty-four.

In the Real School in Newstadt, Dresden, the number of recitations somewhat exceed the above, and generally they equal it. Thus can be seen the amazing amount of labor required of the students in these schools; nor are any pupils excused from the full number prescribed in the study-plan.

I must not omit the Höheren Burger Schule of Nassau and the Gewerbe Schule of Prussia and Saxony, also called Real School, second degree. These are nearly identical in their study-plan, which differs from that of the Real School proper, in omitting the Latin entirely and giving greater attention to the modern languages, French and English and to those branches relating to practical life. These schools are exceedingly popular and successful, being demanded, as with us, by those who do not value drill in Latin as important in preparation for the duties of an unprofessional life; but as the study-plan in these schools differs from that of the one described, only in the above particulars, it is unnecessary to give it here. In the schools of this type which I visited in Berlin and Wiesbaden, their appearance impressed me very agreeably. They seemed more intellectually active than any similar class of schools I visited. It had struck me in visiting the Real Schools of the old type, that the pupils were studying Latin with heart and head reluctant.

GYMNASIUMS

rank as highest of all secondary schools in Germany. It is from these that students graduate to enter the Universities, and they correspond very nearly to our best Latin schools and colleges combined, receiving lads at seven and graduating them at eighteen years of age, and most remarkable schools these are. I will not give the extended study-plans.

From that of the Vitzthume Gymnasium of Dresden, probably the most renowned institution of this class in Germany, and justly; from its study-plan it is shown that the number of recitations each week varies with the different years, from twenty-five to thirty-two exclusive of singing and *turning*.

The course of study in these Gymnasiums is of the most thorough and broad character, demanding the utmost devotion of their students during the entire course of eleven years, and graduating them with a more thorough and comprehensive knowledge of the classics than is often found in the graduates of our best colleges in the United States.

The above named schools are all, in effect, that are embraced in the justly celebrated system of public instruction for boys in Germany.

It has seemed to me that in no department of school training and culture, can we of the United States derive so great advantage from Germany, as by transplanting the wonderfully true and beautiful system of Fröbel's Kinder-garten, — conceived, wrought out and put in practice by the consummate

genius of Fröbel and transferred to the written page by his pupil and kindred spirit, the highly accomplished and nobly self-sacrificing Frau Von Maren-holtz-Bulow. This system is very little known, even by educators, in this country, else there would be less of that vague talk concerning it, when forming a topic of discussion. A professional gentleman of Massachusetts returning from Europe, remarked—"I have visited the *Kinder-gardens* of Germany, and in not one of them did I find a garden which compared with hundreds I have seen in this country!"

Fortunately, through the learning, the ability, and devotion of Elizabeth Peabody whom we are all proud to claim as our country-woman, this beautiful system has been presented and interpreted to us.

I am informed that an accomplished and successful "Kinder-garterin," the late chief teacher in Frau Fröbel's *Kinder-garten* in Hamburg,—Fraulein Marie Bölte, has been engaged through the efforts of Miss Peabody, to open a *Kinder-garten* in New York this autumn.

I predict that the time is near when the name of Elizabeth Peabody will be honored as few other American educators, and chiefly for her able and disinterested efforts in behalf of this system, destined to do so much for the happiness and right development of children during the three or four years previous to the ordinary school age.

It is not an invention, hence imperfect, but a discovery of God's truth as relating to his children's development, and as such is perfect, and not sus-

ceptible to modification or improvement, as many claim. It is in harmony with the nature of children, whether German, French, Chinese, English, or the children of all nationalities as found in the United States.

It was my happiness to visit these Kinder-gartens in Hamburg, Dresden, Berlin, and other cities, placing my children in them some months, and after giving special attention to them, examining also the seminaries where their teachers are trained in Berlin, I can speak in unqualified praise of the system as I understand it. As the system of Fröbel has not yet been adopted as part of the German in any German State, and is now merely tolerated in Prussia after years of entire prohibition, its only claim to be termed German is due to the fact that Fröbel was of that nationality. While, therefore, it affords me pleasure to bear this testimony so unqualifiedly, its further consideration does not belong here.

I should be glad, if time allowed, to speak of other educational institutions more special in their character, such as seminaries for teachers, agricultural, forest, polytechnic, mining and art schools, conservatories of music, schools for deaf mutes, etc., for reformation of juvenile offenders, such as the "Rauhehaus" at Hamburg, under its founder, Dr. Wichern, and with which I was not agreeably impressed, for in all the above classes of schools, it was my pleasure to make many visits. But the time is limited, and I pass at once to the third topic,—

Schools for Girls.—In the German system of in-

struction there is a direct and public acknowledgment of the mental inequality of the sexes. Goethe says "The highest attainment of woman is to comprehend what man writes," or to that effect, which also seems to be in accordance with the views of German philosophers and educators of the present time. This is seen in the radical difference in the study-plans of the schools for girls and those for boys.

Never are the two sexes permitted in the same school, except in the three lowest grades of schools, and then only during the first three years of attendance, save in the Dorf, or country school, where the population is sparse, and a separation would greatly increase the expense.

Burger Schools for Girls.—Here the study-plan is nearly identical with that in the same class of schools for boys, except that, in the girls' school, are never taught those elementary principles in geometry which enter into the boys' programme; the other branches, elementary and common, the girls have the same as the boys, and, in addition, often various forms of needle-work and cutting out, with embroidery, etc., are added. The girls receive drill in *turning* the same as the boys.

Generally, no opportunities are offered in the public schools for further education of girls than in these Burger schools, but within a few years superior advantages are afforded in several of the cities. Such are variously termed *Töchter-Schule*, *Höher-Töchter's*, or Girl's High School, and are admirably adapted for the instruction designed to impart in

them. It must, however, be remembered that an exceedingly limited number of girls, comparatively, have the opportunity to attend such; in fact they seemed an experiment with the Germans, and not yet fully acknowledged as an established fact, and making part of the system.

The Victoria school in Berlin is an excellent specimen of this class, though I judge the Rath's Tochter-Schule (city girls' school) in Dresden superior to any visited by me in Germany. The following is the course of study from which can be seen the highest facilities furnished girls or young ladies in any of the public schools in Germany, when it will be evident that not from Germany are we of the United States to seek information concerning the education of girls.

Study-plan of the *Höher Töchter's Schule*, Wiesbaden, Nassau.

First and second years, girls seven and eight years old. Religion, reading, writing, arithmetic and hand-work, needle-work, etc., in all, twenty-one recitations each week.

Third year. The same as the previous, omitting arithmetic and adding German and French grammar and fine penmanship, twenty-four recitations a week.

Fourth year. Religion, German, French, geography, arithmetic, singing, penmanship, hand-work, gymnastics, in all, thirty-one recitations each week.

Fifth year, girls eleven years old. The same as the previous, omitting arithmetic and adding draw-

ing, history and English, thirty-three recitations a week.

Sixth year. Religion, German, French, English, history, natural history, geography, singing, arithmetic, fine penmanship, drawing, gymnastics and hand-work, thirty-seven recitations each week. Literature is added the seventh year, thirty-eight recitations a week.

Eighth and ninth years. Religion, German, French, English, literature, history, and geography, natural history, arithmetic, drawing, singing, hand-work, fine needle-work, embroidery and *turning* or gymnastics, thirty-six recitations a week.

When it is remembered that each recitation occupies fifty minutes followed by ten minutes recess, it will be seen that for the girls in these schools there are from six to seven hours occupied with recitations, listening to lectures, etc., each day of the week. Latin, geometry, algebra, the elements of chemistry, natural philosophy, physics, astronomy, and other equally useful branches, are entirely omitted even by oral lessons, so far as I learned. No attention whatever is given hygiene, deemed so essential with us.

It is thus seen how generally limited are the facilities offered for the school education of girls, for it must be remembered the above description is of the best and highest order of girls' schools and of which there are very few in all Germany.

Should a parent wish to furnish the means of a superior education to his daughter, it can only be

done, and at great expense, through private tutors, for the private schools for young ladies are rarely superior to those described above. In all Germany there is no institution where the facilities for the highest culture of young ladies are at all comparable to those furnished at Vassar College, Poughkeepsie, N. Y., nor am I aware that such advantages are demanded by any considerable number of parents or educators.

The idea of decided mental inequality in the sexes, is seen, not alone in schools, but throughout the entire social life and in all classes of society in Germany of which, however, it is not my present purpose to speak. Such, in brief, is, in many respects, by far the most comprehensive, thorough and best system of public instruction ever adopted in any country, so admirably adapted to the purpose designed, wrought out with such consummate skill and exactness, and so all-embracing as to meet the wants of every child throughout Germany.

Nor is the perfect system of military drill and education carried out with much greater fidelity and exactness than this relating to the school education of the young. There is much in it from which we can profit, and let us adopt all which is adapted to us, and carry it into execution with the same faithfulness.

IV. Criticisms, Suggestions, etc.—The Prussian or German system of Public Instruction has impressed those of our teachers and educators who have visited the schools in those countries, or who have given some attention to them, so strongly and

favorably that one would judge it a perfect system, from their reports.

Very rarely have I ever noticed a severe criticism upon the system, or a serious defect pointed out;—this was probably due to the conditions under which the visits and examinations have been made. In the case with Horace Mann, in 1843, and others before and since, the object undoubtedly was, to learn the *good* features in the system, present and urge their adoption by our people, nor did it enter into their plan at all to occupy the attention of the American people with any of its defects.

With many others, I must believe that their visits and examinations have been altogether too brief to afford more than a very superficial knowledge of the system, in its varied and complicated parts. While freely and gladly acknowledging the great superiority of this system, as a whole, to any other with which I am acquainted, it is, in my estimation, far from perfect, and inferior, in certain respects, to that adopted in some of our States, and carried into successful operation in several of our cities, towns and communities.

With great diffidence the criticisms I make were first suspected; then held doubtfully, till, by conversations and discussions with very many teachers and educators, I ascertained that they often held similar views, and, from increased familiarity with the schools, I was convinced of the following defects:

I. *They are autocratic.*—This characteristic is inseparable from the despotic form of government of

the German States,—with every department of military or civil life, and requires no further proof.

II. *Grossly unjust and illiberal towards women.*—It is not necessary to add to what was seen in the study-plan of the girls' schools, and from the fact of their exclusion from all the higher schools throughout Germany, to convince American teachers and educators of the great injustice towards the sex. In none of the above mentioned Government schools are ladies employed as teachers in any considerable number, nor could I learn that the tendency is to increase the number, for, as was stated, the mental inferiority of woman is quite universally believed by all classes, not excepting the women themselves.

From my observations in the German schools, there is scarcely any movement so calculated to improve them, in my judgment, as admitting both sexes to the schools of every grade, and the introduction of thoroughly competent lady teachers of culture and refinement, tending, as it surely would, to render the girls more natural and womanly, and the boys purer and more manly.

III. *Undemocratic.*—This is readily seen from what has already been said. It is so in its whole plan and execution ; it is next to impossible for a parent to exercise the least control, even over the education of his own child, though in a school to which he must send, and regularly, from the seventh to the fifteenth year. In the country, and in villages, it is generally quite beyond his privilege to select the school which his children shall attend ;

it was, however, found that in the cities and larger towns, where there are different grades of schools established, a difficulty arose ; parents ambitious for their sons' advancement, would exert themselves and pay the few thalers difference in the tuition between the Burger and Real School, sending them to the latter, or higher grade of school.

This course being taken by increasing numbers the past few years, the effect has been to crowd the Real, at the expense of the Burger School, and to furnish opportunities for pursuing branches of study which the Government considers not only unnecessary but actually pernicious to the lower classes. The difficulty was obviated most adroitly and in the following manner. Though the price of tuition is low, as we estimate prices, still, twenty-five to thirty thalers per year, is, in fact, a large sum in any German country to an artisan or servant.

The tuition in the Burger Schools was lessened in amount, in order to render them in reality nearly free, while that of the Real School remained the same, or, as in some instances, it was increased in amount.

This occurred in Berlin, 1869 and '70, the season I was there ; the result is, as was anticipated and desired, the relieving the upper and filling the lower schools, thus continuing the children of the laboring classes in schools mostly by themselves. Thus, theoretically and practically, the children of the whole community are separated by Government, and kept in three or four distinct grades of school by them-

selves, where the studies are arranged with special reference to their future position in life. Much more can be said to show how this principle of caste operates in the schools, but enough. It is not my desire here to discuss the question whether the German system is better, as they claim, for the Government to decide the class of school, course of study, and thus determine the future social condition of the child, or, as with us, leave that to the parent or, as is so often the case, allow our youth to study, in hap-hazard style, various branches with no thought of their adaptability to the requirements of their future position and calling.

There is much to be said upon each side, and probably the true course lies between the two. Certainly the intelligent parent better knows the peculiar traits of character in his or her child than any outside observer.

IV. The Schools are denominational, narrow and bigoted. As previously stated, all children must enter school at seven and continue till fourteen years of age, or till confirmation in the church, which often requires longer continuance. No sects are acknowledged or tolerated in schools in nearly all the German states, but Lutheran Protestant, Catholic and, of late, Jewish. If of Catholic or Jewish parentage, the child is allowed to receive religious instruction from the Priests of their own faith. All others are forced to study the Bible and catechism under the strictest Lutheran construction which, though adapted to the dark ages of Luther's time, is quite unsuited

to the advanced thought of the nineteenth century. This continues from the beginning of the seventh year to the fifteenth, and, as is seen from the study-plans, occupies very much of the pupil's time, both in and out of school, during the whole seven years of school life.

Hence the parents belonging to any Protestant sect, whether Trinitarian or Unitarian, are, in Prussia, and most German states, forced to submit to have their children study, for years, a catechism inculcating dogmas utterly at variance with their own views; nor is this all, for they must undergo a rigid examination in the principles of, and be confirmed in, the church with which they have little or no sympathy, the same whether they attend public or private schools, or have been taught by private tutors at home. You ask "how can this be enforced?" No merchant can employ a native German lad in his place of business,—no mechanic accept as an apprentice,—no housekeeper a servant girl, unless they can produce a certificate of church confirmation. In fact, no marriage can be entered into in Prussia, Saxony, and some other German states, without such certificate from each party. The following incident fell under my own observation, and will illustrate how tenaciously the semi-heathen and barbarous laws of Luther's time are still maintained, notwithstanding the accumulated light of three hundred and fifty years demonstrates their worse than absurdity.

A young lady of our acquaintance in Germany,

was engaged to a young gentleman, professor in one of the Real Schools of Saxony. Though the lady was highly accomplished and of the most charming character, yet being of Jewish parentage, the professor, who was a Protestant, could not marry this lady without losing his position as teacher, nor would he again be permitted to teach in the kingdom, unless the young lady would consent to renounce the religion of her parents and be confirmed in the Lutheran church. The test was too severe, and she has consented to exchange the form of her faith that she may become qualified for a professor's wife in one of Kaiser William's public schools. The lady assures me that while she thus, under compulsion, confesses with her lips, the sentiment of her heart will remain the same.

It should be stated that, within a few months, the Emperor has yielded to the persistent and almost universal efforts of the teachers and educators in the Empire for the removal of Herr Von Müller, Minister of Education, who resisted all attempts to remove from the teaching in the schools, dogmatic theology. Bismark, too, lately joined in, and soon caused the minister's removal, so it is expected the worst features of the religious question will soon be eradicated, but at present, the above criticisms are in order.

With these criticisms upon the system, in which probably three-fourths of the teachers and educators of Germany will sympathize, I will close, though more can be added.

To recapitulate :—The German system of public instruction or of Government schools is (1) autocratic in not allowing parents a voice in the education of their own children, (2) unjust towards girls, establishing and perpetuating the idea of their great mental inferiority to boys. (3.) Undemocratic, in the schools for different castes in society, and (4) sectarian and narrowly bigoted, in the religious dogmatic instruction prescribed and forced upon all.

Perhaps I should add, the schools are not free as we rank free schools, inasmuch as they are still almost universally tuition-paying, except with parents too poor to pay; or in case of the few Burger Schools in Berlin above cited. It is stoutly contended by every educator, even the most advanced liberal and republican with whom I conversed, that it is far better for the parents, pupils and community, that the schools should be tuition-paying, on the ground that what costs little is valued accordingly.

I should be glad to speak of the methods of imparting instruction which, though in the main excellent, and in some respects very superior to those generally practiced with us, are also, in certain particulars, defective and reflect injuriously upon the characters of the future men and women of Germany. Especially should I be glad to analyze the problem presented by the fact which the Germans acknowledge, viz., that with our inferior system of instruction, we actually develope among our native New England boys and girls more of real distinctive character, and a more efficient class of men and wo-

men to meet, grapple, and successfully overcome the difficulties of life, than the Germans, whether here or in their own country. This most interesting and important problem should be cautiously and wisely considered, so that, if possible, we may adopt such features of the German system as are adapted to us, and no more.

The above criticisms have not been offered in any captious spirit, nor with the least desire to convey the impression to any one that we have schools already equal in efficiency to those of Germany, for we have not. While I contend that our republican form of government and social life in New England tend inevitably to educate our people outside of schools in a much superior degree to those of any other, I as confidently affirm that the work of the school-room is not so thoroughly, or efficiently, performed with us as it is in the schools of Germany. Our school-buildings and furniture are far more costly, comfortable, and convenient; the apparatus and text-books of a superior character, in my estimation;—the salaries of teachers more liberal, and the community generally more earnest and generous in support of our schools than is the case in any other country, so far as I have observed;—yet our lads are not nearly so thoroughly taught as in the schools I have described. Where, then, is the chief defect? Shall I speak it to you, gentlemen and ladies, fellow-teachers? The chief defect is in us, in you and me, in us and our methods.

There is scarcely a single branch of school study

whether it be reading, spelling, language, arithmetic, geography, or other, that cannot be taught, and more thoroughly, in one-half the time it requires at present. I know very well the slippery ground upon which I stand in the estimation of those self-satisfied teachers, constitutionally averse to any innovation, sometimes disrespectfully termed *fogies*, yet who generally consent to move with the current just before it is too late. Remember, however, we are *together*, and I take my full share of what reproach belongs to us. While it seems to me, we teachers can and should investigate and introduce improved methods to our schools and classes, I think that our system of public instruction is such, at present, as to render it impossible for us to make the needed reform in full. Here a teacher is obliged to instruct classes in eight or ten different branches. To do this well, requires an amount of information, on the teacher's part, which is possessed by few of the most distinguished scholars in our country; hence we are, and must be, more or less superficial; but as above stated, it is largely the fault of our system, as well as of ourselves.

In Germany it is not so. There each distinct subject that is taught in the schools, especially in the Burger, Real, or Gymnasia, has its own professor, whether of Latin, French, English, mathematics, natural science, etc. You see, at once, how superior the instruction imparted must, and should be.

I will not, however, indicate other comparisons between our own and the German schools to our

discredit, and perhaps too much has already been said for my own safety.

It would give me pleasure to speak of other excellent features in the German system, the Gewerbe, or Industrial schools, which have been so admirably developed there, and of others, but the time allotted me is past.

The True Education.

BY E. E. WHITE, COLUMBUS, OHIO.

Two extreme theories are earnestly contending for the control of American education. One of these theories asserts that the sole end of school training is the development of man's faculties in due harmony. All lower ends are dismissed as unworthy of consideration. The practical utility of knowledge in business affairs is accepted as its sufficient condemnation as an element of education. Culture, it is urged, has nothing to do with life's toils and struggles. Her grand and only function is the perfection of man as an intellectual, esthetic, and moral being. Her brow must never wear the coronet of an earnest endeavor to alleviate the miseries of the world or rectify its disorders; and, above all, her hands and garments must never be soiled by degrading contact with human toil and industry. This is the Hellenism of Matthew Arnold of England, who looks upon *knowing* as sublime, but shrinks from *doing* as something vulgar. The nearest approach it permits the scholar to make to the present affairs

of earth is to let his consciousness play around them, and his thoughts stream in upon them. He is to be self-centered, dignified, and serene amid life's storms and earthquakes. His sublime mission is to get "sweetness and light," and his sublimest achievement is the exquisite and delicate expression of an exquisite and delicate thought. This is educational *dilettanteism*.

Over against this theory is that educational criterion which asks of every school study, "Of what practical use will its *facts* be in the shop or in the store, on the farm or in the factory, in managing a railway or a bank?" The supreme and ultimate test of the worth of knowledge is its *practical utility* for the purposes of guidance in life's business and toil. If a fact can not be used in the work of life, it is declared to be a useless fact, and its acquisition a positive waste of time and effort. "Light! Yes, we do want light, but it must be light which will help us to work and find food and clothing and lodging for ourselves." "No education which does not make this its first aim is worth anything at all."

This, in a few sentences, is that narrow utilitarianism of which the historian Froude of England, is, perhaps, the extremest advocate—the educational theory which is to-day clamoring, not only for the exclusion of the classics from our educational courses, but for the complete subordination of American culture to industrial pursuits and interests. It makes human life rest upon the base of life-preserving and bread-winning activities, and taper to the apex of

taste and sentiment. To this pyramidal criterion, *beginning with its base*, all knowledge is summoned. If it will serve as *brick or mortar*, if it can be used as *tool or material*, it is decided to be of transcendent worth. Man's labor is made the supreme good, and the architect is subordinated to what he builds. The prime test of the worth of knowledge is the *intrinsic utility* of its facts in the industries of life. The "vital knowledge" is the art of getting a living—of winning one's bread and shelter.

I have stated these two extreme and opposing theories as a preparation for an earnest inquiry for the true end of education. What should be the leading aim of school training? What its comprehensive function? These are the great questions which underlie, and are to determine the scope and character of American education and culture; and hence their right answer is a matter of the highest practical interest and importance.

It will aid us in this inquiry if we remember that the present wide-spread conflict of educational ideas is but the battle between those opposing views of human life, which divide and antagonize the great thinkers of the age. The real leaders in these great controversies which have brought the traditional methods of education into the very throes of revolution, are the Scientists and the Hellenists, the Materialists and the Psychologists, and the other antagonistic schools of speculative thinkers. Education is their battle-field.

The first step then in the inquiry under consider-

ation is to go back of it to another, to wit: What is man's chief end in the present life? This is the fundamental question; for when we have discovered the chief end and purpose of human existence, we have, as a consequence, found the highest function of education, since to prepare man to meet completely the purpose of life is the comprehensive aim of school training. What, then, is the chief end, the central aim, the ultimate purpose of a complete human life?

In answering this question I shall not attempt to solve the profound problems of human existence. Nor shall I ask philosophy to guide me back to man's origin that I may learn *whence he is*; nor to lift the veil of futurity that I may know *whither he goes*. This would be asking the blind to lead the blind. Neither the sublime laws of evolution, nor the grand sequences of physical nature, can reveal man's origin, or destiny, or glory. I would rather reverently accept the truth that man is a child of God, created in His image and for His glory, and crowned as an heir of immortality. This is better than postulate or hypothesis; this is revelation.

Turning to this being with such an origin and destiny, we discern that he has two natures, the one spiritual, the other physical,—the one a regal soul, the other a subject body. Appealing to human consciousness, we learn that man's spiritual nature is endowed with faculties and powers, each capable of almost infinite expansion and culture; and both reason and experience show that these embryo powers can only yield fruition through their development

and perfection by activity and use. The soul's birth-right is *capacity*—capacity to know, to feel, to will, to enjoy—but all this heritage may be buried in a napkin, or bartered for a mess of pottage! The mere possession of these capabilities is not the realization of their sublime end. They are bestowed under the divine command, “Be ye perfect,” and their great purpose is reached only in their deepest, widest, and intensest activity and vigor, and in their nearest possible approach to perfection.

But man has a body as well as an indwelling soul. His God-like, spiritual nature is tabernacled in flesh, and its development and perfection are limited and aided by physical conditions and needs. The body is not only the earthly home of the soul, but it is also its agent, its helper, and nourisher. Through the physical senses the mind holds communion with external nature,—and what knowledge, what raptures, what impulses and desires flow through these senses into the soul! Moreover, the activity and powers of the mind are limited and conditioned by its incarnating physical organism. Through the broken walls and gates of the body disease enters the very citadel of the soul, and its noblest powers become the wildest discord or the most helpless imbecility. Hence the care of the body is a most important concern and duty of life. Not only is it to be fed, clothed, and sheltered, its health and vigor preserved, but its blind and clamorous appetites are to be controlled and ennobled.

But it is to be observed that the perfection of

man's physical nature is but the *condition* of a higher good. The body exists *for* the soul that inhabits and glorifies it. Physical comforts, health, and perfection are but means to a sublimer end—that end the nurture and perfection of man's spiritual nature. What is the worth of this physical temple, when reason chatters at its portals, or idiocy stares through its windows? *The soul is the Supreme human fact, and the perfection of that soul is man's SUPREME PERSONAL DUTY.*

Nor am I forgetful in this statement of the teachings of the Westminster divines that "man's chief end is to glorify God and enjoy him forever." I accept this as a concise and comprehensive statement of human duty. But how is man to glorify his maker? Says a recent writer, "The cultivation and increase of all the powers of our nature to the greatest possible intensity, and in the greatest possible harmony, glorifies Him in whose image our nature is cast, and translates the Westminster formula from the abstract into the concrete."

But this is not the whole truth. God is glorified in the *right use* as well as by the perfection of man's powers. Man can not live to himself. He dwells in no profound solitude where self is the centre and circumference of duty. He is confronted, not only by Nature with her substances, forms, forces, laws, and life, and the universe with its light and truth, but on every side he is surrounded by *human relationships*, calling him to duty and serving as channels for his outflowing activities. Filial dependence

and gratitude bind him to parents, and paternal love links him to his offspring. While the first great commandment bids him love God with all the heart, the second seals him as a member of the great brotherhood of man, whose condition and needs call for his deepest sympathies and afford the widest scope for his activities. Nor can man shun these human relationships except at the peril of his own personal culture and well-being. The command to love one's neighbor is not a mere sentiment; it is the divine law of human progress and welfare written in the constitution of man and society. Brotherly love has a reflex flow. Like mercy it is twice blessed; it blesses him that gives as well as him that receives.

Nor is this subordination of man's two natures changed if we make earthly happiness the supreme end of being. Here we shall find the highest enjoyments flowing from the perfection and use of man's higher powers. The sensualist, the glutton, and the savage are not the best types of human happiness. The exalted delights of the intellect, the exquisite thrills of esthetic taste, the sacred raptures of moral beauty and Christian faith far exceed the Epicurean pleasures of appetite and sense.

Moreover, the culture and perfection of man's higher nature, multiplies and ennobles the sources of physical enjoyment. The nearer a man comes to the brute the fewer and coarser are his physical wants, and, on the contrary, the higher his elevation above the mere animal, the more exalted his desires, and the richer and nobler his enjoyments.

Ignorance everywhere clothes itself in rags and dwells in hovels. The Indian builds his rude wig-wam, and fashions his bow and arrow and tomahawk, and with these his wants are met. But open the capabilities of the mind and heart by education and Christian culture, and man's desires take the wings of the very light, and the earth, the universe and heaven are articulate with joy and peace. To a hungry body the dinner horn is a herald of good news, but to the hungering soul the proclamation that a Savior is born is "*the good tidings of great joy to all people.*"

The supply of man's physical wants has, indeed, its attendant enjoyments, but a view of the harmonies of creation and of the sublimer truths of God's redeeming love, thrills the soul with raptures unknown to sense.

Here, then, we find a law of subordination—the body subordinated to the soul—and my next point is that this same law of subordination which rules in man's nature, pervades all human activities and relations. As man's chief personal duty is the perfection of his higher nature, so the highest parental duty is the development and culture of the child's spiritual being. The body of the child is, indeed, to be tenderly cared for and nurtured, and its health and vigor faithfully and wisely secured, but there is something in that unfolding life dearer to the parent's heart than physical perfection and beauty. In every smile of joy, in every gleam of dawning intelligence, is seen the indwelling worth, the object

of supremest care and solicitude—the God-imaged soul.

A like subordination is seen in man's relation to material civilization. The great enterprises that tax and honor human skill and industry, the humming manufactories, the winged and steam-pulsed commerce, the iron highways belting the continents, the lightning's nerves stretched through the ocean's depths and pulsating with the world's passing history,—these are all but agencies to minister to man's needs and well-being. Their glory and their value are alike the reflex of the soul's worth. Let intellectual and moral civilization be turned back toward paganism, and how quickly the tide of material progress recedes. The truth is, what the race most needs, even to secure physical well-being, is not better leeks and onions, but deliverance from animal dominion—a passage through the Red Sea out of this Egypt of spiritual bondage into the Canaan of spiritual freedom. The supreme human earthly want is a higher, broader, and truer manhood.

The same law of subordination pervades man's civil and political activities. An important function of government is the protection of life and property, because these are necessary to realize the higher ends of life. Likewise material advancement and the multiplication of physical comforts and easements are important elements of national prosperity, and should receive due attention. But these are not the highest ends of government. The vital elements of national life are liberty, justice, truth, honor, vir-

tue, knowledge, manhood, dwelling regally in human hearts, and when these cease to vitalize and ennable a nation's material civilization, its bloom and fruitage perish. Constitutions and laws, executives and courts, commerce and art, churches and schools, are but coordinate agencies for the protection and nurture of man in his complete birthright and destiny. A republic is something more than a few millions of ballots or an organized impulse. It is an organized people, with faith in God and man, and trained to a comprehension of their mutual rights and duties. Republicanism in its essence is a civil brotherhood, whose conscience speaks in the name of the King of Kings and whose decrees are justice and truth.

This brief survey of the ends of human existence and their true subordination may thus be summed up: Man has a dual nature—an immortal soul and a mortal body, the former the supreme worth, the latter the wondrous means of the soul's activity and perfection. The comprehensive personal end of existence is the development and perfection of man's entire nature, and the highest personal duty is the perfection of his spiritual nature. As a consequence of this subordination of man's two natures, the physical to the spiritual, all the duties and activities of life are in like manner subordinated—those that minister to the soul and its needs being higher and more important than those that directly nurture and sustain the body. In the order of time, physical wants may take precedence, but in intrinsic value the soul is the chief good, and its development and

culture are the supreme and ultimate earthly end and purpose of life.

This view reveals the fatal defect in that philosophy of education which regards man as a grand physical organism, born of physical nature and reaching up to—*nothing*; that makes a complete human life rest upon the broad base of bread-winning activities, and taper upwards through parental, social, and civil duties to mere esthetic gratification and enjoyment; that makes the material forms and conditions of civilization more important than civilization itself. Such a view of life subordinates the soul to the body and reverses the ends of human existence.

A complete life is rather a truncated cone, resting on the smaller base of physical being, and lifting itself by widening sections of nobler activities until it fills the circle of the soul's highest wants and loses itself in the infinite perfections of its Maker. In a true philosophy of life man is broader and higher than his physical conditions and needs.

In my excursions into the country, I often pass two trees which stand as opposite types of human life. One springs from the ground daintily with a vigorous trunk, but with no visible roots. All its branches grow away from the earth with increasing vigor, and its spreading top opens widely to the sunlight and the shower. It uses the earth, but *grows toward heaven*. The other tree not only strikes its roots deeply into the earth, but it sends out great ones upon the surface. Its lowest branches are long, luxuriant, and drooping, but the upper branches be-

come shorter and shorter and less vigorous, until they end in a dead top. It grows green and vigorous towards the earth, but *dies toward heaven!*

Having thus found the chief and subordinate ends of human existence, we have also found, as a consequence, the prime functions of education, and we are now able to state them in the order of their true subordination. The first and highest function of school training is the development and culture of all man's powers and faculties in due harmony and equipoise. The second and subordinate function is to impart a knowledge of those facts and principles which are practically useful for the purposes of guidance. The first aim is *discipline*; the second *knowledge*.

Likewise each of these functions sub-divides into two. The *disciplinary* function includes (1) the perfection of man's higher nature—the developing, purifying, and beautifying of the soul; and (2) the nurture and perfection of the body. The *acquisitive* function includes (1) the acquisition of knowledge needed for the proper discharge of life's higher duties; and (2) the acquisition of information useful in promoting physical health and well-being, that is, "in getting a living."

We thus reach an exhaustive statement of the aim and purpose of school education—a statement that places man above, and yet prepares him for his life's work; that neither exalts him into an ethereal region of serene repose to be satiated with what Arnold calls "sweetness and light," nor trails his man-

hood in the furrows of life's toil. It unites man to nature, to society and to God—to nature that he may discover her laws, utilize her forces and enjoy her munificence ; to society that he may eradicate its evils, improve its condition, and receive its protection ; and to God that man may be sustained, guided, purified, and saved.

These comprehensive functions of education give two criteria to determine the value of a school study. 1. What is its value as a means of mental development—of soul culture ? 2. What is the value of its knowledge for the purposes of guidance in life's work ? A branch of study that meets the first of these tests is to be preferred to one that will only meet the second ; and a study that meets both is of assured value.

In the application of the first of these tests, two facts should be considered, to wit : 1. A school course should train *all* the mental powers in due harmony. This is the more necessary because the work of life may afford them very unequal activity. Most occupations, when pursued continuously and intensely, groove the mental activities, and result in narrow, lop-sided men. The mind needs a broad preparatory culture to enable it to resist this narrowing tendency of life's business. 2. The disciplinary value of knowledge depends largely upon the *method* of its acquisition. Knowledge admirably adapted to the right exercise of the mind, may be so taught or acquired as actually to enervate and deaden its powers.

In the application of the second criterion, the utility of the knowledge acquired, a careful distinction must be made between those empirical facts and details which are best learned by experience, and those general facts and principles which can guide and fructify experience. The knowledge necessary to make a boot or a coat, to shoe a horse or build a house, is to be acquired by learning the art, just as a boy must learn to swim. The artisan must serve an apprenticeship, and our schools can not be made workshops for this purpose. It may be true, as Froude claims, that "every honest occupation to which a man sets his hand, would raise him into a philosopher if he mastered all the knowledge that belongs to his craft," but this method of making philosophers is hardly practicable in our schools. A school in which tailors, weavers, carpenters, shoemakers, etc., are each taught the "knowledge that belongs to his craft" would be a curiosity. Let us try to set such a school in motion.

Here are fifty children representing the different trades. What shall be done with them? In order to instruct them in common, we must teach them common knowledge. Grouping the knowledge of their several crafts, and eliminating that which is not common to all, we find that the quantities, are, as arithmeticians say, prime to each other—the common factor certainly does not exceed a unit. The only alternative is to put the representatives of the different trades into separate classes, thus organizing a tailors' class, a shoemakers' class, a carpenters' class,

a masons' class, a hostlers' class, a cooks' class, a nurses' class, etc.; and, as each class is to be taught *practically*, it must be supplied with appropriate tools and materials. The hostlers must be supplied with horses, the nurses with babies, etc.! It need not be added that such a scheme of education as this is utterly Utopian. The truth is, the knowledge directly and specially used in the different trades and pursuits of life, can receive but little attention in a course of general education, and for the sufficient reason, that such knowledge has a special application and is not of general interest and utility. Besides, all experience shows that an education dwarfed to the facts that concern a given occupation defeats itself. Special preparation for given pursuits needs to rest upon a general preparation for all pursuits, and the more comprehensive the general culture the more fruitful and useful the special training. This remark does not exclude branches of study, or drawing, which are useful in nearly all pursuits, and which are also a valuable means of culture.

Moreover, were it desirable to narrow every one's education to the groove of his future calling, such a plan would not be feasible in this country where the child is not necessarily born into the occupation of his father. Here the different pursuits stand with open doors, and neither the child nor his parents know which he will enter, nor how long he will remain. How many Americans find themselves at forty in those callings which gilded their boyish day-dreams, at fifteen? This one fact is sufficient

to show the fallacy of deducing the necessity of a general system of industrial education in this country from the educational experience of countries where the occupations of life are inherited and predetermined. The future calling of an American boy does not fall within the certainties of intuition or instinct, and by no calculation of chances can he foretell what knowledge, or what quality of mind he may need in the affairs of life. A majority of American students come to the beginning of their school courses ignorant of their own bent or aptitude. It is only after a wide and varied trial of their powers in the mastery of branches in all the great departments of knowledge that they find out the studies and pursuits for which they have special taste or fitness. It is one of the purposes of general education to disclose the pupil's bent and mission. The idea of putting before a young lad a catalogue of studies from which he is to select his course, is about as hazardous as a later attempt to choose a wife from a collection of photographs, or, what is a fitter illustration, from a list of names of the feminine gender. Our likes and tastes are quite dependent upon knowledge, and love before sight is not quite sure to be love at sight—and especially *after* sight.

The truth is, that what man most needs for the business and labor of life is, not so much specific knowledge, as mental aptitude and power. "Education," says Mill, "makes a man a more intelligent shoemaker, if that be his occupation, but not by teaching him how to make shoes; it does so by the

mental exercise it gives, and the habits it impresses." The abiding, practical result of school training is soul-power. A knowledge of the facts and principles relating to a given pursuit, is very important, but higher than this is that developed strength and ability, that power of discernment and application, which can change the dead facts of knowledge into the living realities of human action and endeavor. Knowledge may guide and enlighten, but discipline gives acumen, strength, self-poise, grasp, inspiration—and these are the lucky winners of success in all the conflicts and emergencies of life. The superficial empiricist with a stock of scientific facts in his head, but with no clear insight into their causes and relations, is liable to blunder in every new application of his knowledge. Practical facts, to be of practical utility for the purposes of guidance, must be applied by an intelligent mind. "With brains, Sir," was Mr. Opie's reply to the student who wished to know with what he mixed his paints, and this answer contains the true practical philosophy of both art and business. The prime want in getting a living, which Mr. Froude makes the chief end of life, is "*brains, Sir,*" —a mind keen-sighted and far-sighted, steady in aim and purpose, and full of faith. *Thought* is the highest practical result of intellectual training. This is the alchemy that changes plodding toil to many-handed industry, and makes the brain of labor stronger than its muscles. It was Prussian brains that won on the fields of Sadowa and Sedan.

But I am impatient to leave this low ground of

business utility, to pass to those higher duties of life which are the chief concern of education, and the truest measure of its practical worth. The prime question to determine the worth of knowledge for guidance is not, whether it bears directly upon the labor of the farmer or the mechanic *as such*; but rather, will it fit him *as a man* for complete and successful living. "Man does not live by bread alone." The artisan must also be the guide of the family, a member of society, a citizen of the State, the guardian of liberty, and the subject of divine government, and out of these relations flow duties of the highest importance. In educating an American citizen we are not training an English operative or a Chinese coolie. He may be a hewer of wood; but if his life answers life's great end, he will also be a hewer of error and wrong. Every child born into American citizenship is confronted by the grandest political and social problems of earth's history, demanding a ripeness of judgment, a breadth of information, and a catholicity of spirit. Here the knowledge of most value for guidance is that which prepares man to discharge the duties of a complete life, and to meet the obligations of an exalted, noble manhood. The engineer must be swifter than his engine, the plowman wider and deeper than his furrow, and the merchant longer than his yard-stick!

One other view seems necessary to complete this discussion. Knowledge has its *intrinsic value*; and its possession is its own satisfying reward. We hear much said of the scholarly zeal of those who seek

knowledge with a view of coining it into money, reputation, or power; but, the fact is, that the devotion to study which has most honored learning and widened its domain, has sprung from a love of truth *for her own sake*; and, we may add, that it is only to those who thus seek her, that she reveals her highest beauty and glory. Who of my hearers has never spent an hour under the full inspiration of the star-lit heavens, in fancy, sweeping with the planets through their orbits, then on the wings of the comet darting out toward the confines of space to the homes of Orion and Arcturus, then through creation looking up to Him whose glory fills the heavens and rejoicing to say, "Our Father." Tell me the price of such an hour's communion.

A little boy of six years became very impatient in waiting for the long-talked of eclipse of the sun, and exclaimed, "O papa! it will never come," and then, as if to cover his impatience, he asked, "*What is it good for?*"—not an easy question for utilitarianism to answer. And yet there may be those present who have traveled hundreds of miles to see the King of Day illustrate the divine law of good for evil by giving to the intrusive moon his own coronal of glory.

Permit me to add, in conclusion, that the principles reached in this discussion shed a clear light upon the great problem of American education. They show that our schools and colleges should have for their first aim, the development and culture of man *as man*, and his elevation toward the highest and best

ideal of a human being ; and, secondly, that they should furnish him with the knowledge necessary for guidance in the activities of life. They show that such is the harmony between man's nature and his life-mission, that the education which best meets the needs of the former is the best general preparation for the latter—thus converting the terms of Herbert Spencer's famous aphorism. They indicate that the reform needed in our courses of study, is not one of exclusion, but of addition and adjustment ; that the “new education” of the near future, will be as wide as the soul's needs, and as comprehensive as the duties of life. They welcome the physical sciences to their true and important place, their study beginning with observation in the primary school, and extending upwards through every grade of instruction to the end of the course. They give an important place to what is called industrial training, but leave the duty of teaching trades to the workshop. They welcome and honor the technical and professional schools as needed agencies to supplement the public school and the college.

But I forbear, entering a respectful protest against the adoption of any criterion of school education that subordinates man to industry, and the soul to its physical conditions and needs. My earnest plea is for an education which seeks the perfection of man, in nature, enjoyment, and labor ; an education whose polar idea is “not the mind only, but the man”—an education that prepares the mind to think the truth ;

the heart to enjoy it; the will to purpose it; and the hand to perform it.

"The world wants MEN—light-hearted, manly men,
Men who shall join its chorus, and prolong
The psalm of labor and the song of love.

"The times want SCHOLARS—scholars who shall shape
The doubtful destinies of dubious years,
And land the ark that bears our country's good,
Safe on some peaceful Ararat at last.

"The age wants HEROES—heroes who shall dare
To struggle in the solid ranks of truth;
To clutch the monster error by the throat;
To bear opinion to a loftier seat;
To blot the era of oppression out,
And lead a universal freedom in."

Influence of Education upon Labor.

BY HON. J. W. PATTERSON.

EXCEPT so far only as mental faculty begotten by culture, is transmitted, the babe of civilization is as much a savage as the babe of barbarism. There are differences of original endowment, but Bacon knew as little at birth as the offspring of the skin-clad Briton of two thousand years ago. The gift of eloquence may have been as perfect in Red-Jacket as in Webster, but the chastened words and terse logic of the learned New England orator would never have moved an Indian council, nor the impassioned picture language of the untutored native have swayed the action of an American Senate. It is the schools which have transformed the chief into a statesman, and the rude maiden of the forest into the accomplished mistress of our literature and our hearts.

The record of human progress is the history of education, and the superiority of our civilization to the crude and cruel life of the unlearned, is the measure of its power. As education affects mind, the efficient agent of all intelligent action, its force is

felt immediately in every field of thought, in every executive enterprise, and social interest, but we propose to consider at this time only its influence upon labor.

The working men of the country are now loudly demanding larger privileges, and organizing to secure rights which, as they claim, are withheld, and we all agree that they have causes of complaint arising from the predominant influence of accumulated wealth, and from certain legal enactments necessitated by the exigencies of the government during the late war.

That the employer and employee are, in the theories of political economy, copartners in the work of production and that there should be a fair division of profits between them; that labor and capital should each be secured by law against encroachments and oppression by the other, no one will question, but we are not yet able to see that the income or influence of industry is to be enhanced by legislation or the social position of laboring men advanced by political organizations.

Labor holds in its own hand the enchanter's rod by which, without extraneous help, it may break the shackles of prescriptive wrong; may dissolve superstitions and banish infelicities to the regions of forgetfulness, and evoke into our horizon, from the mysterious realm of the possible, the affluence of uncreated wealth, and the splendid triumphs of undiscovered art. The sphere of thought is the arena in which it must work its revolution and establish its rights.

An ignorant population is cursed by conceits which shrivel manliness, and consume all enterprise and thrift. In the counties of England in which, according to governmental statistics, only one person in ten could read, a little time since the people wore charms for the ague; killed and cured their cattle by enchantment; excluded witches by a horse-shoe nailed to the threshold; carried bits of coffins in their pockets to baffle the cramp; tied red strings around the tails of new-milch cows that fairies might not steal the butter; and still tilled the soil with the old Roman plow and harrow.

The uninformed farmers in portions of Italy, we are told, even now break the earth with the root of a tree attached by a grape vine to two cows; and in stagnant Egypt, the plow is still drawn, as in the days of the Ptolemies, by an old woman and a jack-ass yoked together. Even with us, there are people who believe in dreams and omens, who run from the ghosts of a church-yard, who tremble at the upsetting of a salt-cellar or the ticking of an innocent insect, who dare not enter upon any enterprise on Friday, or wean calves when the sign is in the paunch, whose potatoes run to tops if planted at the increase of the moon, and whose pork boils away in the pot if killed at its decrease. All such blighting puerilities are monopolized by the ignorant, and flee before the light of intelligence, as unwholesome exhalations before the heat of day.

There seems to be a fallacious inference of the popular mind in our day as full of danger as of con-

ceit, that equality before the law implies an equality of capacity to discharge the duties of every position, industrial, social, political or even sacred, which our institutions hold out to the aspirations of all, and so, by means fair or foul, fools rush in where angels fear to tread, but industrial equality and financial success are impossible to ghost-ridden ignorance in this sharp age. Brutish unreflectiveness is baffled in its conflict with the disciplined, vigorous brain, and capital flows to intelligence, and the two rule the world in spite of agrarianism. Children of all ages, by a law of nature, must be subordinated to a wisdom higher and broader than their own.

Education lifts the man of toil from servitude to the clumsy and unproductive past into sympathy and coöperation with the improved and progressive present. It frees his soul from a degrading sense of inferiority and subordination to the superior intelligence of others, and begets in him independent thought and a manly self-assertion. Not unfrequently a vigorous mind, which has been left unschooled and undeveloped, rebels against its conditions of inferiority, and, if it cannot surmount it, turns to dissipation. Shackled and dependent, it chafes and fumes, moves by fits and passions, and sometimes assumes a temporary audacity of manner to cover and compensate its conscious servitude ; but, when placed by fortune in its normal condition, it settles into a quiet repose of temper and moves forward with a calm but persistent power. I knew

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such men in the late war, whom the responsibilities of command lifted from recklessness to sobriety and to whom it imparted a dignity and grace of manners and a pride of character which surprised their most intimate friends. The possession and exercise of power filled them with aspirations for a new and nobler life.

Such men are measurably types of whole communities and races. There are common faculties and aptitudes which have been dormant in the masses through all the ages, and are now slowly awaking into activity with the spread of intelligence. The many who, through most of the world's history, have been held in vassalage, and made pack-horses for the few; who have served only to feed the luxury and the lust, and to gratify the cupidity and ambition of their self-constituted masters, have been advanced in our day, by the general diffusion of learning, to a participation in the privileges and responsibilities of business and government; have been prepared to project and execute colossal enterprises, by sea and land, which would have been deemed miracles by the magnates of the old days of arbitrary power; have covered the plains and mountains with waving harvests, and have filled the river valleys with the music of machinery; have rifled the earth of its hidden treasures and transmuted them into imperial cities; into the innumerable products of our practical civilization, and the splendid works of high art; have covered the earth with markets and multiplied indefinitely the objects of traffic.

Such and so great have been the contributions of education in the past to the estate of labor, and to education must labor look for the realization of its hopes in the future.

Great discoveries are ordinarily made by men devoted to science, but the countless inventions by which the forces of nature are made to do the work of man, and the productive power of labor indefinitely enhanced, are, for the most part, the work of practical men whose minds have been enlightened and quickened in the schools. Ignorance rarely makes any advance on the methods of industry. Progress must be secured by those familiarized by study and use with the laws of force and the principles involved in machinery. Such were Arkwright, Watt, Fulton, Morse, and *all* the great names in the history of invention. Not more than one in a thousand of working-men has been prepared hitherto by intellectual discipline to add anything to the agents, or the methods, of production, yet no man can estimate the debt which the world owes to this handful of discoverers and inventors. They have made impossible things easy; have substituted plenty for want; have multiplied comforts and luxuries a thousand fold; have measurably removed the hardships which brought premature decrepitude and old age; they have lessened the hours of toil and added to those of recreation and improvement; they have opened the world to commerce and multiplied its objects; they have imparted new beauties and perfections to the utilities of life, and increased national resources and pop-

ular wealth. Could the *whole* force of intellect employed in the various manual pursuits of life be enlarged and inspired by study, how large would the volume of practical thought become; how thickly studded would the arch of our history be with the lights of genius, and how grand and rapid would be the march of progress. Working-men would then find little occasion to organize for their own protection, for they would be the acknowledged masters of society and would dictate its laws.

The secret of *popular* power is in universal education. A director in one of the extensive corporations for the manufacture of cotton in Lowell, Mass., stated to a Congressional committee, a few years since, that only forty-five out of twelve hundred operatives employed in *their* mills, were unable to write their names, and that the wages of the eleven hundred and fifty-five who could read and write was twenty-seven per cent. higher than the wages of those who could not. This illustrates a law. Estimates, based upon a wide generalization of facts, have shown that generally the labor of an educated person is twenty-seven per cent. more productive and remunerative than that of an ignorant person.

In the same mills were a hundred and fifty girls who had been teachers. The wages of these quondam school teachers was seventeen and three-fourths per cent. above the general average, and more than forty per cent. higher than the pay received by those who made their mark.

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Some years since, the agent of another of the manufacturing companies in the same city imported a large number of workmen from England. They received but half the pay of the better educated native operatives and it was supposed they would excel them in skill, but they did not earn a living and were a total failure. All but two or three were dismissed in as many weeks.

It is true that foreigners are largely employed in those establishments at present because of the impossibility to get natives, but, except those engaged upon coarse kinds of work, they have either been educated abroad or are foreigners who came to the country as children and have enjoyed the advantages of our schools. But as it is; the quality of our manufactures has to be maintained by improvements in machinery.

It is generally believed by our people that foreign labor, especially in manufacturing and the mechanic arts, is superior to domestic. This is a mistake, made, I apprehend, by confounding educated labor with skilled labor.

That facility and accuracy of manipulation which we call skill, is acquired by perpetual repetition of one thing and arises from that division of labor which always takes place in densely populated countries where work is a drug, wages low, and food scarce. The lace and tapestry weavers of France and the trinket-makers of Japan and China have skill, but they are necessarily narrow, stupid and starved. They know but one thing and can do but one thing,

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and when that ceases they die. They are useless for all other purposes of industry and for all purposes of social or public life.

Skilled labor is transmitted from father to son and treads its narrow round without thought of change, but educated labor is curious and inventive, seeking constantly to relieve toil and make its results more perfect and remunerative by improved methods and the introduction of new forces. When our countryman, Bigelow, would improve the carpet loom and was stupidly refused admission to an English factory, he bought a piece of carpet and studiously unraveled it, till he had invented a loom which superseded the English loom upon English soil, and has added immeasurably to the productive industry and wealth of our country. It is the forecast and insight of disciplined intellect, not brute muscle, which accumulates the treasures and wears the honors of the world. Centuries ago the sun-stained Hindoo first made cotton cloth, but to-day, a Yankee girl will spin as much as three thousand daughters of Delhi. Such is the spirit of an enlightened industrial population. They advance with the advancing years, and sustain the progress they have helped to create.

An intelligent ship-builder informs me that before our late war, we were able, by virtue of the superior working quality of our men, to compete successfully with the English in the construction of vessels, though we paid twenty-five per cent. higher for labor, by the day, than they. The difference in the cost of the same quantity and quality of *work* is far

less than the difference in the price per *day*. Ignorant labor is narrow, mechanical, and generally poor, and for this reason, if for no other, it must be low-priced; but superadded to this, it is necessarily servile and dependent, and will always be overruled, wronged and oppressed by the superior intelligence and concentration of selfish capital.

Among an uneducated people, wealth naturally accumulates in the hands of the few most sagacious and best informed, and the whole history of the world proves that social and political power will go with it and be wielded in the interests of the class who possess them. There can be no legislative guards and bulwarks which will securely protect the rights of labor, so long as the great working majority of a people are unschooled. No other class of society is so profoundly and immediately interested in the maintenance of national intelligence; no other should guard with such ceaseless vigilance against the lapse of popular intelligence by the influx of foreign and the growth of native ignorance. The places of learning are the sources of productiveness, of inventive genius, of mercantile enterprise, popular equality and civil power. It is in the school-house that peoples have passed from childhood to manhood, from subordination to independence, from pupilage to mastership. At these fountains we drink the inspiration to great deeds and lofty character, and engender thoughts that ripen into divine philosophies and imperishable literatures. From these science goes forth to marshal her countless

utilities, and art to fill her canvas with enduring beauty, and build her temples that teach through the ages. Our own Franklin has said, "If a man empties his purse into his head, no one can take it from him." Not even a bold man would dare impeach the practical wisdom of the philosopher on a question so obvious, but his axiom is only half the truth. The investment of capital in knowledge is not simply the safest, but it is the most profitable disposition we can make of our fortunes. He who so invests may, after a time, empty his head into his purse, if it possessed any raw material originally. A stupid clod-hopper sows his grain and reaps fifteen bushels to the acre ; his neighbor puts his brains into his work and reaps fifty bushels to the acre. A similar disproportion of income runs into every branch of human industry.

Intelligent labor is not limited to single lines of pursuit, and the quality of its work is as superior as its quantity, and hence the demand for it, and the price which it is paid is greater than for the simpler and ruder efforts of the uninformed.

The ignorant sometimes attribute to partial legislation, or to a defective political or social organization, the infelicities and misfortunes due to their own defective education, and demand laws which shall equalize things in themselves unequal, as though that would not be the greatest inequality, and a precedent dangerous alike to liberty and labor. The function of law with us is to secure equal opportuni-

ties to all and to protect capacity in a fair struggle for success.

Mind enters into every effort of the hands, and determines its result. Labor is the instrument by which it gives palpable existence to its conceptions, and the character of the product depends upon the nature of its culture.^{9*} The product cannot rise above the thought-level of the brain in which it originates. Great things are born in the long agony of thought. The paintings of Raphael were the natural offspring of that intellect in which he drew diviner pictures than he could transfer to canvas; and so the spinning-jenny of Arkwright was the invention of a mind fully up with an advanced practical civilization.

The law holds with nations, for they are aggregates of individuals. Barrenness and poverty reign among the ignorant descendants of the old Greek whose culture culminated in temples, and statues, philosophy and poetry; while the prosperity and power of England have advanced with the intelligence of her population. The founders of our government understood this, for a committee of the convention of 1787 proposed to introduce a clause into the constitution "to establish *public institutions, rewards and immunities* for the promotion of agriculture, commerce and manufactures." The proposition failed, but the people, in each of the original states, established schools which have been the source of our unparalleled prosperity.

If the annual increase of our wealth is to advance

with an undiminished ratio ; if the unexhausted fertility of our soil is to supply breadstuffs and cotton for the expanding markets of the world, and the mineral ores beneath our soil are to rise into a thousand forms of utility and beauty ; if the sound of machinery is to be heard on all our streams, and a lucrative commerce to fill our rivers and line our sea-board ; if our most interior settlements are to be taken to the sea, and intercourse and unity to be given to our imperial domain by railroads ; if the hundreds of millions of people hereafter to throng our prolific territory are to be virtuous, industrious, homogeneous and patriotic, universal intelligence must be maintained by a system of instruction reaching to every family, and as broad as the boundaries of the republic. Thus only can we bring to bear upon all, those motives which, in other lands, awaken the aspirations and kindle the ambition of the few, and so avail ourselves of the immeasurable industrial capacity and intellectual force possessed by the *whole* population.

Here too, I apprehend, is to be found our ultimate security against the incorporated moneyed aristocracies, the *imperium in imperio*, which are already concentrating wealth, controlling business and baffling individual enterprise ; which have their representatives in state and national legislatures, demanding grants and subsidies, and threatening to control the politics of the country. This corporate absolutism is antagonistic to the genius of our institutions and, if allowed to grow, may in time de-

stroy the freedom of both labor and politics. Undoubtedly it hastens the development of resources and the accumulation of wealth; but we cannot afford a development which impoverishes the masses and destroys personal liberty. The abuse of power, however, by the shrewd and reckless managers of corporate influence, fortunately carries its own antidote in an educated community, for there men as able, and as well informed, will rise up and on the authority of the people who are the source of rights, demand the surrender of franchises and prerogatives which threaten the equality of rights that underlies our institutions. Universal intelligence will, in the end, abolish class monopolies and privileges in the industrial and political organization of society. When each person is able to realize his natural equality with, and independence of, every other, no association or institution, governmental or other, will be allowed to exist, which militates against the public welfare. Then, and not till then, there, and only there, shall we have a fair division of the profits of production between capital and labor. Capital is selfish, labor is unreasonable, and both are oppressive when they have the power; and only when a whole community has the intelligence to comprehend the natural relations and common interests of capital and labor, will the spirit of this senseless and bitter controversy which now cripples the thrift and enterprise of business, be laid.

It is not strange that working men, as they become conscious of their rights and power in the advance

of popular intelligence, should rebel against the monopolies and inequalities with which they who do the work of the world have had to struggle in the past. Depressed by poverty, paralyzed by false social and political theories, and too ignorant to organize and conduct any systematic opposition, they have been trodden down and left without any chance, to struggle hopelessly under the hardships and sorrows of their lot.

Now, uplifted by intelligence in these modern times, there is likely to be a rebound to the opposite extreme. Not considering for the moment that capital is accumulated, unconsumed labor, and legitimately entitled, in any enterprise, to the same per cent. of the profits as the immediate labor employed, combinations of working-men are liable to drive capital from productive investments and destroy the demand for labor which makes wages high, and so blight the general prosperity of the country. When the struggle reaches this result, the poor will be the first and the greatest sufferers; for where capital is withdrawn from the great industries of the land, work will cease, and they who live upon their daily labor must starve or flee to other lands. There becomes at once a surplus of population for the means of support.

The growth and diffusion of wealth depends upon a mutual recognition and obedience to the law which underlies business, and that is very simple and easily understood. If one man invests a thousand dollars for a year in any enterprise, and another puts in

brain work or manual labor which, at a fair market price, would bring a thousand dollars, it seems clear that, after allowing to capital a small per cent. for its extra risk, there should be an equal division of the profits. The profits, and hence the price of work, in each case, must be determined by the parties interested. It is impossible that a price of labor, fixed by law and invariable, should give a fair division of profits in all industries and at all times and so be just to both capital and labor. These things must be settled by a mutual understanding of the parties, and therefore both must be so far educated as to understand their rights and the nature of the business in which they are engaged. To attempt to settle this by legislation would be to destroy the liberty of labor and restore to government the power arbitrarily to interfere with the private rights of different classes, which is the essence of monopoly and slavery, and might, in time, return to plague the inventor. If law can fix my pay at four dollars a day, it can limit it to fifty cents, and I should fear that capital might some day get the control of the legislature and break me on my own wheel.

I do not complain that labor organizes and agitates for the improvement of its condition. I only ask that it may be in the direction from which help can come.

All the work of the Roman world, before the fall of the empire, was done by slaves. The farmers, miners, artisans, house-servants, play-actors, and even literary men, worked for their owners, or others

to whom they were hired out, as did our negro slaves. In the middle ages, serfdom succeeded to slavery in the progress of civilization. Until within eight years, the best mechanics and farmers of Russia had no legal right to their wages. The products of labor, like all other capital, belonged to the great landed aristocracy. Enforced poverty and labor are necessary to the maintenance of arbitrary power, and arbitrary power is doomed where labor is made free.

Now, after a struggle of two thousand years, labor has theoretically become free. No man is here born to a caste or special employment. Theoretically labor, with us and in Western Europe, is now a matter of open and free contract between the employer and the employe. It is so in law, but not entirely so in practice. Ignorance and poverty put limitations upon the freedom of work. The man who would sell his wheat, if he can not get the market price, returns it to the granary; and he who would purchase, if he finds the price too high, pockets his money for a better opportunity; but the man who has to exchange his labor daily for bread, for himself and family, does not sell in a free market. He is measurably a slave, under the law of necessity, to the will of capital, and is often obliged to accept less than his just due at the dictation of avarice. Poverty may withhold a man, or a whole class, from equal rights even under impartial laws. So, too, the working class may be overreached through ignorance of the price of labor, or the market value of the products of their industry.

Now, for the purpose of gathering and spreading among working-men the requisite knowledge of the facts and conditions of business, and of supporting members of the fraternity when overreached, till such time as capital will consent to make a just division of its gains, societies and trades-unions are organized and maintained and, though liable to abuse, are as legitimate as the combinations of wealth for the acquisition or increase of power. Labor is wealth unaccumulated, and has the same right to enhance its power by organizing as accumulated wealth has. It may be said that such bodies sometimes act with violence, and disturb the good order of society, and are a dangerous force in the State. Undoubtedly this is true. The same may be said of war. Will anybody deny that war is sometimes necessary to wrest human rights from the grasp of power, and help on the progress of man? Co-operative associations are, for the most part, companies of working-men who contribute their own, or borrowed capital for the prosecution of some industrial enterprise upon which they themselves work, and which is superintended by one of their own number, elected for the purpose. Could this system become universal, production would be effected by a co-partnership between capital and labor which would banish strikes and discontent, and lead to a more equal and general diffusion of wealth. Hitherto such enterprises have succeeded in only isolated instances, and will not be introduced as a general system till workmen can accumulate capital in sufficient amounts to compete

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with the great establishments which rest upon colossal fortunes, and whose operations have been reduced to the most perfect efficiency and economy by the experience of years.

A rich corporation can avail itself of the most improved styles and methods of work, and of all advantages of the market, both in buying and selling; while an establishment in want of funds works by the clumsiest and most expensive methods, and is forced to purchase its supplies at the dearest, and sell its products at the cheapest. This difference is often sufficient to determine the question of success or failure. Since the emancipation of labor, working-men have, slowly, but constantly, been bettering their condition. Four shillings a week, without board, was the average agricultural wages in England, at any time between the Restoration in 1660 and the Revolution in 1688. In 1680, a member of the House of Commons said that the high wages paid in England make it impossible for the products of the English looms to compete with those of India. An English mechanic, he said, instead of slaving like a native of Bengal for a piece of copper, exacts a *shilling* a day. It is true he often works for less, but this sum is the demand. Macaulay also assures us that six shillings was deemed good pay, at that period. But a hundred years later the price of labor had doubled, and it has increased from that time to this.

In the United States, where the supply of labor never satisfies the demand, the rise of wages, ac-

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cording to Dr. Elder, has been more rapid than in Europe. The average wages paid in this country in 1860 were fifteen and twelve one-hundredths per cent. greater than in 1850, and this rise was relatively greater than the increased profits of production.

The co-operative system seeks to blend capitalists and laborers into one class, in the work of production. But the good time will come but slowly unless the working class become sufficiently informed to comprehend the whole field of affairs, and sufficiently disciplined to manage with efficiency the business enterprises and great industries of society, for the old theory of production is buttressed by a thousand prejudices ; is interwoven with cherished conceptions of grace and magnificence, stability and power, and hallowed by the lapse of years. The industrial, like the political systems of Europe, have come down from an age which denied that the many had any rights which the few were bound to respect. The people were the "hewers of wood and drawers of water" to their divinely-appointed masters. In theory they were fore-ordained to toil, poverty and misery ; and their rulers, to indolence, luxury and power. That is the fundamental idea of the industry of a large part of the Old World to-day ; but the American system is based upon the equality of men, and, consequently, the equality of capital and labor, and the right of an equitable division of profits. If one person gives to a product the value of the raw material and the interest on his invested capital, and

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another, the worth of his labor, each has furnished an indispensable element in the creation of wealth, and each is entitled to a fair share of the value impressed upon the product. The old system of production, now somewhat relieved through the influence of free, self-directed labor, but still unchanged in principle, with which the American has to compete, takes from the laborer all the value which he produces, except a fraction for the scantiest subsistence, and bestows it upon the capitalist, or deducts it from the price of the article to the consumer in the market, and so tends to drag remunerative labor down to its dying rates and its ignorant, squalid misery. Now the profits of labor are the means to popular intelligence, and popular intelligence is requisite to secure the profits of labor. Ninety-nine in every hundred of the people must, at length, rebel against such an outrage to their rights. The American system is obligated to protect itself in the interest of humanity and national development against this dark age policy of industrial oppression, for so only can it survive till, by its example, it lifts, year by year, the working masses of the world from hunger to plenty, from ignorance to intelligence, from servitude to self-government and the enjoyment of the wealth which is their own by the right of production.

Industrial freedom is as impossible as political freedom, to an ignorant population. Reformation in this, as in civil affairs, has its origin and growth in intelligence.

Much remains which ought to be done for the social and industrial elevation of society. "Hitherto it is questionable," says Stuart Mill, "if all the mechanical inventions yet made have lightened the day's toil of any human being. They have enabled a greater population to live the same life of drudgery and imprisonment, and an increased number of manufacturers to make large fortunes. They have increased the comforts of the middle classes; but they have not yet begun to effect those changes in human destiny which it is in their nature and in their futurity to accomplish."

This picture was drawn for Europe, and does not correctly present the facts as they exist among us. The industrial classes of America enjoy more comforts and luxuries, and, in many instances, possess more wealth than nobles and princes of the line did, two hundred years back, in merry England; yet it is true that the labor-saving machines which genius has given to toil, have not, as they should, lightened the burdens; have not lengthened the years, nor plucked away the care and decrepitude of the millions whom want has forced to "travail in pain together" till the time of their deliverance comes; they have not given to the poor who have kindled with the desire for a nobler lot and higher mission than they have inherited, leisure to enlarge their knowledge and build up their faculties to the measure of the work they would do. The genius of a Christian culture is yet to lead the people from the brick-yards of their servitude into the larger

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liberty of the future, when wealth will be satisfied with smaller accumulations and the poor will enjoy rest from their larger profits.

But not only does education render private and corporate usurpations and monopolies impossible; not only does it draw the whole population into the drift of business, and so increase its momentum; not only does it lay the gifts of each citizen under contribution and inspire him with the hope of personal success, and so insure the material prosperity of society and the growth of civil power; but it also gives temper and stability to the character of the nation, and imparts unity, consistency and durability to its historic life. When a whole people can deliberate and reason upon affairs, they do not drive recklessly into hurtful excesses, nor give themselves over to ruinous courses and the dominion of blind passions.

I have confined myself, in what I have said, to the influence of education upon labor. There is a larger domain into which the theme tempts us to enter, but the hour forbids. The dependence of free states upon popular enlightenment was discussed by the earliest writers upon government, and has been fully recognized by the statesmen of our own republic. Jefferson has said "If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be." Webster is even more emphatic when he says, "I have no conception of any means in which the popular republican institutions, under which we live, could possibly

be preserved, if early education were not fully furnished to all by *public law in such forms that all shall gladly avail themselves of it.*" These words, from such a source, I can but think, have a peculiar significance in our time, and should lead every thoughtful man to ponder well upon the security of the foundations of the republic. The electric interchange of thought, the ease of intercourse and the activity of the press, are mingling and unifying the intellectual and moral conditions of men. Does the political and social status of our great cities indicate that we are leveling upward in the process of national growth? Do the intelligence and morality of the country keep pace with its increase of numbers? Does not the endless babble of words, in which rights are confounded with privileges, and privileges with rights, indicate that the people are becoming unsettled and confused in respect to the essential principles upon which society is organized? Do not the rise and progress of parties, which draw their vitality wholly from prejudice and passion, intimate a dangerous instability of national character? These are grave questions and worthy of the profoundest and most solicitous consideration. However we may answer these interrogatories, in this we must agree, that the schools of the land must be maintained, to preserve its prosperity and its life. Every collateral aid, too, should have our approbation and support. Libraries should be established, and a virtuous press scatter its leaves for the healing of the nation. Books are the chief auxiliary

and frequently a substitute for schools. They are the vehicles by which knowledge is brought down and scattered. The intelligence of a community is assured in which a love of reading has been formed.

The diffusion of intelligence through the community, by the agency of public and private libraries, is transforming the face of society. Influences, mightier than armies, are going forth from these quiet retreats, and silently working revolutions more grand and decisive than have been produced by all the potent forces of antiquity. Like so many converging lenses, they gather the scattered light of all ages, and pour it along the path of civilization. Before the increasing brightness, false theories and old superstitions are dissipated ; clumsy methods of labor and of art are yielding to the cunning devices of all-transforming intellect ; the chains of slavery are melting ; old abuses in schools and government are passing away ; despotic institutions are crumbling, and the frame-work of society is being reconstructed on a nobler and more Christian plan.

The influence of books is greatest, and most far-reaching, upon the active and plastic minds of children. Bad works drop a poison into their hearts, which insinuates itself into the very center of their moral being, and thence works outward through the character, till all is diseased and corrupted. The lives of pirates and banditti, drawn in a fascinating style ; works of fiction into which the cunning hand of genius has woven bad morals and pernicious prin-

ciples ; the songs of licentious poets, and the literature of a corrupt court or age, if suffered to fall into the hands of youth, debase the warm imagination before the reason begins to exercise its discriminating power. Such works corrupt the fountains of life and give an irresistible proclivity to vicious courses. But good books, through which great thinkers, and large-hearted Christian men speak their words of warning or of cheer to posterity, are an invaluable treasure to the young. Through these silent corridors of thought, the master spirits of other days and all tongues come back and sit down with the humble cottager at his fireside, or with the prince in his palace, and discourse familiarly upon all high themes. Here Shakspeare lifts the curtain from before the great play of life, and Milton sings his severer song of Paradise Lost and Regained. There the Herschels, father and son, direct the eye to the stars and nebulae that stand on the outermost verge of creation, and Newton traces the footsteps of nature through all her secret paths. Now the soul is entranced by the creations of the Wizard of the North, and now fascinated by the unsurpassed narrative of Irving. The teachings of history are unfolded to us by Niebuhr and by Macaulay, by Prescott and Bancroft. The eloquence of Burke pours its princely affluence into our minds and fills our hearts with unutterable emotions. The grand and massive oratory of Webster, irresistible as when first it fell upon a subdued and awe-struck Senate, "thrills in every vein" and lifts us above the aspi-

rations of ordinary life. We take in hand a volume of Augustine, or Baxter, or some other of the godly men whose influence was a saving power to other ages, and, by imperceptible gradations are transformed into the same image. These and such as these, are the teachers of the young who have access to libraries. From such companionship an influence, silent but irresistible, goes forth to enlarge the capacities and multiply the resources, moral and physical, of our whole population. The boy or girl who has acquired a love for reading, and who has the means for gratifying such a taste, rarely engages in vicious pursuits, or becomes the victim of debasing appetites. The mind is preoccupied by elevated themes of thought, to be pondered while the hands are busy, or in the vacant hours which might otherwise be given to folly, if not to vice. The memory is stored with knowledge which gives weight and interest to conversation, gravity and stability to character, and elevates the tone of social intercourse.

A wise Providence, in developing the divine plan of progress, bestows upon some children special gifts. These endowments are given without regard to social distinctions. God allows no monopoly of his bounties. The responsible recipient may be born in affluence and power, or in the comfortless and unprivileged hovel of poverty. It is the duty of a free government to yield obedience to the divine law of human improvement, by establishing schools and libraries for *its whole population*, that so the

preordained teachers and leaders may take the places to which they have been divinely appointed. If this was the universal practice, men would find their natural places; shams and quacks would soon lose their occupation.

There is a natural affinity of kindred spirits. Minds of similar genius instinctively tend to each other. Place a gifted youth in the midst of many good books, and he will obey the attractions of mind as naturally as the flower turns to the sun. He will receive the heat and light that perpetually emanate from the utterances of true men. The germs of thought will be awakened, which, later in life, may ripen into inventions, poems, philosophies, or systems of commerce and government. Aspirations will be enkindled which penury, adversity, opposition and envious malice will fan into a celestial flame. The trophies of Miltiades will not suffer the youthful Themistocles to sleep. The ambition of the conqueror of the world was nursed by the Iliad, and the first Napoleon made Plutarch's Lives his daily companion. So must it ever be. Thought, truth and goodness, can never lose their power to influence and mould the characters of men.

There are districts in most of the States in which schools are kept only three or four months during the entire year, leaving eight or nine months in which the children of those districts are without any instruction. Of all the children who attend our public schools, probably one-half do not enjoy school privileges more than a third of the year.

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Such children stand in special need of libraries to which they may resort, and where they may find the means and motives to intellectual improvement. Place before them the works of the best authors, and they may be stimulated to the acquisition of knowledge which will prove a full compensation for the loss of schooling. During the sessions of the schools, also, students should have access to collections of books for collateral reading. They are necessary to illustrate the studies of the student, and to deepen and enlarge his view of science and literature. The attainments sometimes made under such adverse circumstances are amazing and very suggestive. Rittenhouse, without teacher, and "with but two or three books," acquired so much knowledge of the mathematics as to be able to read the *Principia* of Newton. He was distinguished among astronomers for his learning. Stone, afterwards celebrated as a mathematician, while yet a gardener, was discovered by the Duke of Argyle, reading the *Principia* in Latin. The astonished Duke asked him how he had made such acquisitions. "A servant taught me to read," replied the boy, and asked, "Does one need to know anything more to learn everything else?" Our own country furnishes a long and illustrious catalogue of self-made men, whose genius was awakened and sustained by books, without the discipline of schools. Franklin and Bowditch, Clay and Irving, and a host of others, whose works and fame are of the treasures of the Republic, stand forth as the silent but powerful ad-

vocates of libraries as a complement to our school system.

A random volume may kindle a flame which will shed a light upon all succeeding ages. A few old books in his grandfather's library awakened a love of history in Gibbon; and Goethe, listening to the Vicar of Wakefield, it is said, was first aroused to a consciousness of his powers.

Town libraries would furnish to the communities, in which they might be sustained, new and instructive themes for conversation and discussion. This would awaken a spirit of investigation, which would greatly increase the general intelligence. The character of the social intercourse of society would thus be improved, good manners encouraged and the moral tone of the whole population elevated. The rough and vulgar habits of our youth would insensibly give place to politeness and refinement; and, what is of far greater importance than any merely external change, the habits of reading engendered by this access to books would tend to restrain the young from the low vices and wicked practices into which idleness and the restless spirit of youth so often plunge them. Such a means of intellectual culture would banish, in a measure, profanity and Sabbath-breaking, and looseness of life. It would do more—it would impart to the rising generation much valuable knowledge of history and general literature, of law and the science of government, of commerce and agriculture, and all the practical arts of industry.

We have not time to multiply arguments, and would therefore urge, as a last consideration, that a well ordered library furnishes a refuge and an unfailing source of pleasure to old age, when the joys of youth and the enticements of manhood have passed. The aged, though still the objects of respect and affection, are likely to be forgotten in the amusements and pursuits of a more youthful generation. One by one they have seen the companions of their childhood, and the friends of later years, fall at their side, and saddened by unconscious neglect and feeling but little sympathy with the schemes and impatient haste of younger men, they muse silently at the hearth-stones of their children, or wander forth to gaze vacantly at the earth and sky, while memory is busy with departed years. On the printed page their companions come back to them, and they live again amid the scenes, and thrill with the events of earlier years. The sweet sympathy and cheerful converse which they have lost with the living, they can still hold with each

"Dear son of memory, great heir of fame."

Let us for this, if for no other reason, establish a library in every town in the country. It would seem as though our filial affection and grateful patriotism could do no less.

Drawing, in Graded Public Schools.

WHAT TO TEACH, AND HOW TO TEACH IT.

BY WALTER SMITH,

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IN a country like America, where education is generally regarded as a living question of the highest importance, it is not to be wondered at that conventions such as this should be continually assembling to criticise and discuss the old agencies and methods, and to learn something of the new. The opportunities afforded for this interchange of experience among educationists in the Teachers' Institutes, County and State Associations, and finally at national meetings such as this, must necessarily account for some of the many excellencies which characterize the common-school education of America. In no other country are such meetings so frequent, or so well attended; and in very few do they exist at all.

A short time after coming to reside in this country, and after having attended some of the Teachers' In-

stitutes annually held in Massachusetts (which were quite new to me, being utterly unknown in Great Britain), I wrote an account of these organizations, and their method of operation, to one of the officials of the English Educational Department, who read and discussed my description with the head of his department; afterwards informing me that it was with the greatest interest they had heard of an agency so novel, and apparently, from my description, so efficient.

The only corresponding organization existing in England, and which has but recently been established, is for the benefit of teachers of art and science, who are annually invited from provincial towns and cities to a sort of Teachers' Institute in London,—lasting for about six weeks,—where the greatest men in science are employed by the government to deliver courses of lectures upon those subjects which are taught in the provincial science and art schools. In this case the teachers are brought to the professors ; and such as attend all the lectures have their expenses paid by the government. This is a modern experiment, and very limited in its influence ; not to be compared, I think, with that of a well-conducted plan of Teachers' Institutes as carried out in Massachusetts, where the professors go to the teachers.

A national organization for meeting and discussion, such as this, does not exist in England ; though, from the additional interest now being felt in the educational subject there, this feature, as well as oth-

ers, may possibly be annexed also to the new national system.

The continual alterations which are made in the field of education, both in methods and subjects of instruction, are indications either of change or of progress, it is sometimes difficult to distinguish which; for growth and decay, development and corruption, are alike equally characterized by perpetual change.

Nevertheless, recent movements, both here and abroad, in the direction of comprehensiveness, can not but be regarded as improvements upon the narrow limits in which the education of the past has been confined; and with new conditions of society, and some of the ability which the world has at its command, it may yet be possible to devise schemes of education that shall have a definite and practical bearing upon each man's future occupation, without jeopardizing all men's necessities in the direction of general knowledge.

In an age when every man must pay his way, or die—and it is impossible to compromise the matter by doing a little of both—we can not speak or think of an ideal education; for that in practice would be advancing a small section of the human race out of all proportion with the rest of mankind—an experiment usually ending in evil times for both the van and the rear.

The actual functions of education are to prepare a human being to get along in this world without any reference to idealities, but with direct bearing upon his faculty at all times to pay a hundred cents

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to the dollar in discharge of his just obligations. And in addition to this commercial morality, and with a sensitiveness which indicates the longing for an ideal standard, it is sometimes thought advisable to throw into the educational caldron a flavor of self-denial which does not appear in the pages of the ledger, and a little taste, to give piquancy to the otherwise prosy railroad journey of life.

The first condition of having constructed or furnished the human machine with the ability to preserve a state of solvency having been complied with, just as the Indian selected his war-club of sound material, we seem to look for yet another characteristic; viz., fitting a man to be happy as well as solvent, by opening his eyes to the beautiful, and his mind and reasoning faculties to the true in nature, science, and art. More than half the difficulties which have beset the path of education in many countries have proceeded from the desire to magnify the importance of this latter element in education, only that the disagreement has usually come to an issue on the question of morals rather than science or art.

The tendency of modern education is to elevate the attainments of all, rather than to increase the knowledge of a few; and the great example which America has gloriously offered to the world is making education as free as the light and air of heaven to every human being who is born under her flag.

Neither ancient, mediæval, nor modern times can show a greater spectacle than this—that the delib-

erate wisdom of the free American people has decided, and carries out by its own free choice, the principle, that society should guard and protect the young from the neglect or poverty of parents, and insure that every possible citizen of the future shall be qualified by education to discharge his or her duty to the State.

I can find no words in the English language which adequately express my admiration of this feature in American society ; and, when the prejudices engendered by my own education in an ancient country sometimes rise up within me, I look out mentally to the school-houses, and then remember the neglected children of England and some other European countries, and all my dissatisfaction vanishes. In place of it comes the sensation that a people capable of performing so far-seeing and profound an act of justice to the weak and defenceless may be trusted in every social relationship ; and from the flag-staff of national sentiment I haul down the union-jack, and as a teacher I run up the stars and stripes of my adopted nationality.

Patriotism is virtuous when one's country is in the right ; it is mere clannishness when the country to which we owe allegiance is in the wrong ; and the sentiment " My country, right or wrong," is not the cry of the man, but the howling of the patriotic slave.

Perhaps the most definite charge made against our systems of education in modern times is that they are too purely intellectual from the first, and

especially so in the lowest schools for children of tender years; that the living senses of the young, which are in a perpetual condition of inquiry, and are therefore the teacher's natural allies, have been very much ignored; while the yet incipient mental and reasoning faculties have been drawn upon out of all proportion to their strength, and with a bad effect upon their future development.

That there is some truth in this view seems to be becoming generally recognized; for in recent years the changes and alterations made in, and the additions made to our educational schemes, have been in the opposite direction to that which we commonly recognize as the intellectual, and have had for their object the more perfect development of the understanding by appeals to the senses, and their cultivation.

Thus the object-lessons which are now so popular, and deservedly so; the experimental, diluted science which is rapidly entering the upper classes; the music and the elementary drawing which is now being introduced into all schools and classes—all these are efforts to reach the individual through his senses. The success attending the Kindergarten system, and its exceedingly humane and gentle methods of instruction, form, perhaps, the most decisive evidence, that, for the education of the very young, we want less of the burden of abstract formulæ, and more honest recognition of the senses. If we remember—what seems generally forgotten—that in the child the senses are developed as strongly

as in the adult, whilst the reasoning faculties are yet but in the condition of instinct, it would seem to be reasonable that education should primarily appeal to those human faculties which will never be more perfectly developed, in order to secure both success in its results, and merciful treatment of the child.

I think that the remarkable success in practical life of many men of distinction and usefulness, to whom the dry education of the school-room with its rules and tables made no appeal, and who, given up as dunces, or securing their freedom as neglected children, sought and found a rough practical education in the fields or woods, among animals, or playing in workshops, proves that even following the natural inclination of the senses, without the advantage of guidance or instruction, is sometimes equivalent to a whole course of school-education.

The fact, also, that to learn something about everything they see, whether in a garden, on the sea-shore, in the market-place, or the shop-window, is a source of the greatest delight to children, proves to me, that, from natural desire, they should find their greatest happiness in learning ; and they do so when information is presented to them as they acquire it out of doors by themselves, or, by persistent questioning, worry their parents or companions out of it.

It is of some advantage to a teacher to have continually under his own eyes and observation a troop of children in various stages of physical and mental development ; and if they happen to be his own,

who in the natural course of things look up to him as the source of all knowledge, he will have an excellent opportunity of deciding that a child's motto is, "I want to know;" and its symbol, a note of interrogation.

We are told that the first important act of our first parents was a disobedient onslaught upon the tree of knowledge. From my own observations on juvenile human nature, I should judge that this is perfectly true, even to the stealing of apples; for there is no one characteristic so inevitably transmitted to their descendants, or which shows itself so early; and any man who disbelieves in the existence of original sin had better try the experiment of bringing up a large family of his own close to an apple-orchard of his neighbors.

Assuming, then, that the young human creature has inherited designs upon the tree of knowledge, and that it is to the manifest interest of society that he should eat and become like one of us, knowing good from evil, the question arises as to what particular apples we should offer to him, so that he may choose the good, and reject the evil, or, in another and more thoroughly nineteenth-century phrase, pay his way, and become a useful member of society.

The first care must be that he shall be taught such common principles of sense as will fit him to understand the common language which is used by the rest of the human race he is likely to come in contact with; then, that he shall be prepared to understand the common arts of civilization, so that the

craft of the majority may not lay him under too great a disadvantage; and lastly, as each human being is but like one single brick in the edifice of society, that he may recognize and discharge his responsibility wherever he may be placed, so that the whole structure may receive no weakness from him.

If it be true, as I have stated, that the natural condition of the child is one of inquiry, and that it feels happiness in finding out what to it appear as new facts, how comes it that school is not perfect happiness to all children?

Without attempting to explain or express my solitary opinion as to the cause of this, it may be that some one will feel as I do—that the brain-work of children in public schools is always, from the first to the last, a little ahead of the brain-power, and that the mere dread of being imperfect, or behind its fellows, keeps the child in a condition of mental irritation ; which, when continued, results in distaste to school and lessons.

That is especially hard upon the good-natured, stupid children, who do not develop early, and who are sometimes thus made to lose confidence in themselves ; whilst it would appear to me the worst possible thing that could happen to smart children with large brains, who would be better held back than pushed forward, until their physical power can carry their brain-power.

The remedy would seem to be to dilute our high-pressure brain-work in the schools with a fair average amount of, say, low-pressure sensual work, so that

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now and then there might be a fallow of an hour or so in the studies, during which the child shall be taught nothing but what requires the use of its eyes, hands, ears, and voice only, without employing its reason, memory, or intellect. A song would do this; and so would the reading of anecdotes of animals for little children, of historical scenes for the older ones, episodes in the lives of remarkable persons, or descriptions of natural curiosities; the teacher not being above the use of a little histrionic power in relating or reading to the class.

In the same way, drawing of objects might be used as a fallow,—not as an amusement, but as an exercise which will employ the eyes and the fingers without distressing the mental powers. This may, perhaps, seem a low motive for which to introduce the study of art, even in its lowest stages, into our public schools. But I look to music, drawing, natural history lessons, elementary science, and object-lessons, to protect our children from over-education, and to make them love their childish work; and, were there no other reason for the introduction of such subjects into our common schools than that, it seems to me that would be reason sufficient.

The new cry for industrial schools is but a phase of the belief, that, before a child leaves school for work, it is possible to teach him something that will be of use in his working-life; and, in a country where apprenticeships can hardly be said to exist at all, the industrial school, either as a separate institution or by the introduction of industrial classes into com-

mon schools, becomes a practical necessity. We want the schools extended in two directions,—downwards into the *Kindergarten*, and upwards into the *Polytechnic*; and the influence of these two additions will eventually be felt through the whole scheme of public education, until their names as representing any distinct methods will be no longer applicable.

Meanwhile, without waiting for any complete changes in or additions to our school-system, the elements of industrial art and science are being introduced into our schools, and among them the subject upon which I am to address you; viz., drawing.

It is, perhaps, not without its advantages, that in this subject America has not been a pioneer. Experiments have been tried, and methods of art-education tested by other nations as though it had been mainly to economize and save our time; crotchets have been indulged in, and delusions exploded, apparently to guard us from making mistakes.

Now that drawing is being taken up in earnest in this country, it is a matter of some consequence that we should begin right, and, rejecting those methods of teaching it which have failed elsewhere, adopt some rational system that is simple enough to be easily understood by all teachers, and by which all children may learn without difficulty.

It seems to me fair to proceed on the hypothesis, that, whatever children may be expected to learn, teachers may be expected to learn and to teach. By practical experiments on large classes throughout entire schools and cities, it has been demonstrated

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that physical or mental incapacity is the only obstacle which prevents children from learning to draw ; and the capacity of teachers both to learn drawing and to teach it is thus proved beyond all question, being both physically and mentally capable.

To succeed in drawing requires the cultivation, in a particular direction, of the understanding and the taste, and development of manual skill.

In this process the adult has immense advantages over the child in that half of the faculty which is based on the understanding ; and is at a disadvantage, comparatively, in all that depends upon manual dexterity, with the child. They are, therefore, about equally capable of learning, so far as capacity goes ; and with both it is a question of willingness and diligence whether they shall draw well or badly.

The matter of executive or manual skill need not trouble us much, unless we have arrived at such extreme old age that our senses are failing us, and our tendons are becoming bony. Our hands will no more refuse to express what the eye sees and the mind understands, than they will refuse to handle a knife and fork at dinner-time,—a catastrophe which does not frequently occur.

That is a mere question of training ; and the hand will always train faster than the mind. I sometimes hear this sort of statement from adults whom I am teaching: "I know and see exactly how it ought to be ; but I can not do it." Now, we may take it for granted that any part of a drawing which depends on manual power will be equal to the knowledge

displayed; and therefore a remark such as I have quoted is usually an unconscious misrepresentation of the facts.

For, to pursue the conversation, I shall say, "Your lines are good enough for all practical purposes; but why reverse their positions? The broadest part of this vase is near the top, and you have made it broadest at the bottom." The answer will probably be, "Why, so it is! now I had not noticed that before." Which means that the poor hand had had nothing to do with the mistake. The eye had been accustomed to look, but not trained to see; and the understanding, which should have been leading the van, was far in the rear; the general complaining that the battle was lost "because of the inefficiency of that confounded little drummer-boy."

The first thing to do in the teaching of drawing is so to arrange its exercises that they shall all be comparatively easy, and each be a preparation for the next. That brings us to the question of grading; what the children in each grade of school are able to do, and how it can be made a consistent part of a general plan, having definite objects to obtain, requiring nothing to be unlearned as the student progresses, and leaving nothing unlearned that may be necessary for his advancement.

I take it that the object of teaching drawing primarily is, that every person shall have accurate ideas on all matters involving a knowledge of form or color, and be able to express them by drawing the shapes of objects, or their tints, as readily as he can give

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their names, or distinguish one from another; secondly, that this power may be so generally acquired, that all trades, occupations, or professions, which, to succeed in, necessitate the ability to draw, shall be prepared for at school by every one, either to practice or to understand, just as learning to read and write prepares all of us for our elementary duties and callings, whatever they may be, so far as reading and writing are concerned; that we know enough of them to make all that depends upon them possible to us, if we are capable of attaining it.

There are three ways of looking at the subject of drawing—1st, as a language; 2d, as an art; 3d, as a science.

In the primary and grammar schools, drawing is to be regarded as a language for the expression of form with accuracy; and its acquisition should be as much a matter of method or a matter of course as learning a written or spoken language, and by a very similar process.

Drawing has, for instance, its alphabet,—the straight line and the curve—varieties and combinations of which compose the vowels and consonants of the language. Then it has its grammar, which controls, or rather explains, the art of representation; true drawing being in art precisely the same thing as grammatical expression in language.

In the high schools, after a good foundation has been laid in the primary and grammar schools, the pupils may arrive at the practice of drawing as an art, in its most elementary stages; though it will be

some time before sufficiently systematic training has been secured in the lower schools to make art-work possible in the high schools.

We may, therefore, consider that the educational aspect of the subject of drawing in the graded public schools is that of a language, the speech of the eye expressed by the hand; and the experience we have in teaching a language will not only indicate to us what to teach, but how to teach drawing.

If we wished to convey the idea of a square to another person, we must either pronounce the name, write the word, or draw the form.

In each case we use our senses as a medium of interpretation; the spoken name appealing through the ear and memory, the written word through the eye and memory, the drawing through the eye alone, direct to the understanding.

What is true of this symbol is true of all degrees of complexity in drawing, until we arrive at works of the imagination, so that the parallelism between drawing and language is direct enough to guide us in codifying the exercises of the former upon our experience in the latter.

This being recognized, every teacher becomes a possible teacher of drawing, and not only a possible one, but the best; for no one less systematically taught, or with less experience in the art of teaching, can teach drawing so well, whatever may be their own art-powers. Though this ought to be the case theoretically, I should hesitate to make such a statement, were it not for the fact that a long experience in the

training of art-teachers has proved that theory and practice tell the same story ; and the most accomplished of art-masters hitherto produced in England have been those who left the field of general education to devote themselves entirely to the special department of art-instruction. This will doubtless be the case also in America ; and it both indicates the practical unity of the processes of education in all subjects, and should give to teachers the confidence in their own abilities to teach drawing, which is necessary to their success.

It is requisite for the general introduction of drawing into the common schools, that all teachers should become competent to teach drawing by practicing it themselves ; and, as it is now becoming required in many States, it will be well to prepare for the duty. Special teachers of the subject, in any appreciable number, cannot here be found ; and, if they could, they cannot teach elementary drawing so well as the regular teachers.

The moral effect of sending special teachers into the public schools to teach an elementary subject, seems to me to be positively evil. Children who cannot draw lines very well are very apt to draw conclusions which are often not wide of the mark ; and the effect of their seeing a special teacher come to give them their drawing-lesson makes them fancy that the subject must be very difficult ; so much so, that their own teacher cannot learn it ; and then they go on wondering why they should be expected

to learn what so wise and great a person as their teacher cannot learn.

So that two false impressions are made : the first, that drawing is difficult ; and the second, that the regular teacher is incapable of learning and teaching drawing to the scholars,—impressions which are demoralizing to both scholars and teachers. Drawing is an elementary subject ; and I would ask, How many of the elementary subjects could any teacher allow to be taken out of his or her hands, and maintain the respect of the scholars ?

Not many, I should think ; and there is no reason whatever, why drawing should be one of them. Even music and singing are now being taught by the regular school teachers, who were never before supposed to have any ears, until a surgical examination made for musical purposes disclosed the fact, that the majority of them, either by accident or design, had been so provided with the organs of hearing by a beneficent Providence.

The question of grading the subject of drawing so as to bring it into a consistent relationship to the graded schools, becomes of much importance in view of the regular teachers being the instructors ; and it is not without influence, if the work be carried on by special instructors.

I shall suppose, then, that we have four classes of schools representing the school periods,—viz., (1) *Primary*, (2) *Grammar*, (3) *High*, and (4) *Normal Schools* ; and the question to be solved is to make the study of drawing in each school a preparation

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for the next, so that it shall hang together like a chain, or be like the stories of a house, resting upon and supporting each other ; and I will, therefore, proceed to describe what is attainable in each.

Before doing so, I should remark that the subjects suitable for each class of school are progressive ; the grammar-school work presupposing that the pupil has passed through the primary school, and the high-school student through both.

It will be seen, therefore, that, where drawing has not been practiced at all in any of the schools, the only grade which could adopt the following arrangement as it stands would be the primary schools. Where no drawing has been done in the higher schools, I should begin in them as in the primary schools, and work up to the specialties of each as prepared pupils came up from the lower schools. That is a difficulty which will right itself in time ; and, meanwhile, it is well to have a standard to work to, so that, in the course of a few years, a sequential method may exist in them all. I come, first, then, to the

PRIMARY SCHOOLS.

Dividing the scholars into six classes for convenience (the lowest being the sixth class), two groups consisting of the sixth, fifth, and fourth, and the third, second, and first, will give us a sufficiently marked difference in the powers of the pupils. What should be the character of the work done in each group of classes ? First, to take classes 6, 5, and 4.

I regard the learning of names, sizes, and elementary shapes, and their relation to one another, as the chief work of the primary school, the drawing being done to illustrate what is being learned. For this reason, every exercise in the lower classes should appeal to the memory through the ear by a distinct name, and to the eye by a definite shape, and thus there will be two influences brought into play, helping forward the subject studied.

The definitions of lines, angles, triangles, quadrilaterals, polygons, and the simpler forms of curves, will both teach these names, sizes, and shapes, and give us the easiest examples with which to begin to teach drawing.

But little children weary with hard names, and tire of mere geometric shapes; and, therefore, though they must be taught the difference between a square and a triangle, and between the length of two inches and six inches, as it appears to the eye, the lessons which teach these necessary facts may be varied by others which are no tax at all upon anything but the point of a slate pencil.

We must get rid once and forever of the notion that the reason why drawing should be learned and taught, is to enable us to make pretty drawings. Neither nice-looking drawings, nor accurate ones, are possible to ordinary children; but the making of even passable drawings will teach them what they can learn in no other way.

Lessons to little children should be short, frequent, and sparkling; giving them no time to get tired, no

time to forget, and no chance of going to sleep. They should be various, so that even those who like no lessons cannot say, "Here is that tiresome thing again!" They should have a clear relationship to what the eye sees, and display what any young animal may discover for itself by using its senses of sight and touch.

Then, as memory plays so important a part in our usefulness and our happiness, every drawing-lesson must be impressed upon the pupils' memories by having it drawn again without the copy,—twice, if necessary to fix it in their minds; for a little learned and remembered is better than much learned and forgotten. Drawing from memory is essentially the process by which efficient draughtsmen are made; and, therefore, I want to see it begun in the primary schools.

Another phase of memory-drawing is called *dictation*-drawing, in which the teacher simply describes by word of mouth the subject to be produced, and does not illustrate it on the blackboard. This can only be carried out when the pupils have learnt the meaning of terms or expressions used in drawing. Thus in a dictation-lesson the teacher will use but few words (slowly given); the pupils knowing the meaning of each, and translating their meaning into form, such as this. Supposing the teacher to address the class as follows:

"In the centre of your slates draw a vertical line six inches in length."

That is order No. 1. And its execution will en-

tirely depend on the pupils knowing what a vertical line is, and how long six inches are when placed in one straight line : so that the dictation-lesson is necessarily subsequent to other lessons which taught the meaning of these terms,—direction, size, position.

Then the second order is,—

“Through the centre of the vertical line draw a horizontal line of the same length as the vertical line.”

Only one bit of knowledge is here required ; viz., What is a horizontal line ? which will have been drawn many times before, the *length* of the line having been determined on the vertical line.

The third order is,—

“These two lines are the diagonals of a square : draw the square.”

In this the pupils must know the difference between diagonals and diameters ; for the distinction affects the size of the square in this exercise.

Not to follow out the exercise to its minor details, it will be seen how such a lesson will educate both the imagination and the hand of the pupil, and teach the meaning of words without any great strain on the thinking powers.

The material used by the pupils should be slates and slate-pencils, the teacher drawing the lessons on the blackboard usually ; though, of course, in memory and dictation-lessons no drawings will be made by the teacher.

To insure variety in practice, the pupils should sometimes be required to draw from cards or copies,—the same size as the examples,—so as to enable

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the teacher to spend a fair amount of time with each pupil, and to throw them upon their own resources without any general verbal explanation.

A large chart of an object or pattern hung upon the blackboard, its character and proportions described by the teacher, and required to be copied a definite size by the pupils, will add another class of lesson, which will further vary the instruction.

The time given per week by the youngest pupils should be at least two hours; and the division of it might be four lessons of half an hour each.

It must not be forgotten that the sympathies and loves of children will be as strongly marked as those of adults, though upon more trivial subjects or objects; and one phase of subjects which appeals strongly to a certain class may make no appeal to another. There should be, therefore, frequent changes in the kind of examples taken, so as to give all an opportunity of drawing that which they can best appreciate.

Classes 3, 2, 1. The higher classes in the primary schools will take up the more advanced exercises in the same subjects as the lower classes, drawing upon paper instead of slates. The first exercises will be to reproduce in review the easy work already done, so as to get into the use of the paper and lead-pencil on subjects which have already been mastered. The definitions of plane geometry drawn to a large scale, the memory and dictation-lessons previously received, will be a fitting introduction to the new work, which will be more elaborate in its examples than in the lower classes.

Lessons, always in outline, from the blackboard, from cards, and from suspended charts, will give a sufficient variety to the work. But I want to see another sort of drawing-lesson given also ; and that is, for the teacher, in giving object-lessons, to require the pupils to draw some peculiarity of the objects described, or some illustration in which the use of the object may be defined.

Suppose the object-lesson be the foliage of trees, and some twenty specimens of distinct varieties are described. These should be drawn diagrammatically by the pupils, however roughly ; firstly on slates, copying the name of the tree, the name of the kind of leaf, and drawing its shape, all being described by the teacher with the real leaves shown to the pupils, and large diagrams drawn upon the blackboard. A second lesson to be a repetition of the first ; the drawings being in books, and arranged systematically in groups.

Any child who can describe the difference in shape of two objects ought to be able to draw the difference ; and will soon be able to do so, even to the smallest details, if trained by the teacher to express ideas both in words and forms with equal precision.

In the primary schools, drawing should be taught for the purpose of familiarizing the children with names and terms and common shapes ; to accustom them to resort to drawing as readily as to speaking, when it will explain their ideas better ; and the great thing the teacher has to remember is, that there will be always the same deficiencies of quality

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in the drawing of children as there are in their thoughts.

There must be no artificial difficulties made for children by arbitrary rules; such as that the slate or book must always be kept in one position, or that the accuracy of leading lines must never be tested by measurement. These old-fashioned rules do no good, but much harm, and are based upon ignorance of what the human frame is capable of doing without dislocating some of its most useful extremities.

I attach less value to great accuracy in the drawing of little children than I do to readiness and facility, and fair ability to draw any simple thing, either from copies, from memory, or from dictation. The accuracy will come as the understanding develops; the hand and eye will not be allowed to do their work badly when the understanding is always over them, and requiring to be obeyed. But even a poor drawing will have taught the child something; and it is not so much the perfect style with which we take one step in a journey which advances us to the end of it, as the persistence with which we go on repeating the steps, some of which will be inferior to others both in results and style as the ground traveled is rough or smooth, level or inclined, and the pedestrian fresh or fatigued.

GRAMMAR SCHOOLS.

The number of classes in grammar schools may be assumed to be six, as in the primary schools; and

the same grouping may be adhered to ; viz., lower classes, 6, 5, 4 ; higher classes, 3, 2, 1.

Taking classes 6, 5, 4, to begin with, we may suppose that they have arrived at a fair basis of knowledge, and some little skill, in the primary schools, and may, therefore, be advanced to more difficult work, requiring one degree more care in the execution, and in which quite a new feature of representation is introduced.

In the primary schools, the drawings of objects are treated geometrically, so as to avoid the great difficulties of perspective effects. In the lower classes of the grammar schools, objects may be drawn on the blackboard, showing the roundness of forms, as well as their outlines or contours.

This enables the teacher to explain the elementary principles of perspective in general terms, and will give him the opportunity to vary his lessons by including familiar forms seen every day by the pupils, many of which cannot be represented geometrically. The geometric solids will be treated now in the same way as the plane geometric forms were in the primary schools. Thus cones, cylinders, cubes, pyramids, prisms, spheres, and all the varieties of forms resulting from them, will be given as definitions in words, and be illustrated by drawings from the blackboard, carrying the pupil from flat to round, plane to solid, by a natural gradation.

In these classes a text-book or class-book may be used with efficiency, giving examples of more elaborate free-hand outline and object drawing than the

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teacher will have time to put on the board. The exercises may be copied the same size, enlarged, or reduced, according to the ability of each pupil, or the directions of the book.

Map-drawing is another phase of the application of drawing, which should be also practiced in the grammar schools, and take its place alternately with other subjects.

Problems in plane geometry, the accurate construction of geometrical figures with rulers and compass, worked from the large blackboard diagrams made by the teacher, can be introduced in the lower classes of the grammar schools; the whole course of from a hundred to a hundred and fifty problems being divided so as to give each of the six classes about one-third of the course. The repetition of a few problems as a pupil is advanced from one class to another will be an advantage.

The memory-drawing will now include a comparatively wide range of subjects; viz., free-hand outline of ornament, of objects, of geometric solids, of plane geometrical problems, and of maps; and the dictation-lessons will be correspondingly advanced.

In the higher classes,—3, 2, 1,—drawing from the actual object takes the place of drawing from the blackboard of the same forms. The cylinder, which has before been drawn from the flat, in order to learn the principle of drawing it, is now placed before the eyes of the pupils; and objects also which are available, and that can be so placed in ordinary class-

rooms that the children can see them, will form an important part of the course.

The more advanced problems in plane geometry will also be worked, and should now be very accurately drawn.

In model-drawing, single objects should first be given as subjects; and, when each of the elementary solids have been so often drawn that something like a fair understanding of it is perceptible, two may be placed together in a group, the combination being a rectangular solid, as a cube or oblong block, and a solid having a curved surface, as a sphere, cone, or cylinder; and so on to three or more objects grouped together, as the classes advance. So also with the geometrical drawing; the constructional problems having been worked in the lower classes, exercises on them, and deductions from the problems, should be given in the higher.

The free-hand outline work, instead of being copies of other work, may also be advanced into the region of elementary design. Geometric forms being given, such as a square or triangle of stated dimensions, some element of form may be given, as a leaf and flower, or a leaf and berry; and the exercise to be, that each pupil is to fill the geometric form by an adaptation of the material to the space given. The elementary form of which the design is to be made should be one which the pupils have drawn several times before, so that drawing it again will be quite an easy matter, and all the attention be given

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to making an ornamental arrangement of it that will be pleasing and original.

This may at first sight appear a difficult exercise for children ; but it is, on the contrary, both simple and extremely popular. Those who have seen the beautiful little designs and arrangements made by children of five years and under, in the Kindergarten schools, will be able to see, that, if a child be taught to draw from five years of age to fifteen in a sensible way upon a progressive method, it ought to be able to do at fifteen something in the way of original design. From twelve years of age to fifteen, every child ought to originate or design some form every week, no matter how simple at first, if only a repetition on a straight line of a plain leaf; and we should then soon see about us an artistic population, who would both create and appreciate good art and good design. The faculty of design has been left dormant in the majority of human beings, as though it were some sacred, priestly office, that it would be sacrilegious to touch. But I want to see every child leaving school capable of designing the form of an object, its ornamentation if required, and be able, when called upon, to show us how the Greeks treated that kind of thing, and in what essential features the Greek and Gothic artists differed in their design and spirit.

Unless drawing, besides performing many other useful functions in education, has taught a scholar who graduates from a grammar school at least as much as that, it has been a useless plaything.

LATIN AND HIGH SCHOOLS.

In the lower classes of the high schools the age of the scholars should enable the teacher to obtain very satisfactory results, remembering the previous experience in primary and grammar schools. Shading may be attempted in these classes as a means of expressing roundness and surface; the method being illustrated in the text-book, and its application to the objects drawn being shown by exercises in half tint from the solid, until the parallel lines required in shading can be drawn with tolerable precision.

More advanced object-lessons in which the principles of botany, anatomy, geology, architecture, and other sciences are taught, may include in their reproduction the exercise of sketching in pencil, or pen and ink, to illustrate them.

The model-drawing lessons may now be more thoroughly understood through the illustrations, drawn free-hand, of parallel and angular perspective.

The harmony of colors, illustrated by diagrams to be copied by the pupils, may be made the means of lessons in their mixture, producing secondary and tertiary colors, tints, hues, shades, and tones, and the origin and chemical character of the several pigments used in art.

Design, which had been hitherto limited to the arrangements of elements in geometric forms, should now be extended to natural foliage and flowers, which may have been employed in the botany lessons.

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Thus a lesson in botany might take the drawing of the front and side view of the flower, and arrangement of leaves on the stem, the general coloring indicated by washes of flat color. That will give the subject for the next lesson in design, the pupils reverting to their sketches for the materials, and applying them to ornament the object given.

In the higher classes of the high schools it seems to me legitimate to employ special instructors in drawing, because the subjects studied after so long a course of preparation in the lower schools and classes will be sufficiently advanced to require technical and professional knowledge in the teacher. The time given to drawing (two hours per week) is so short for such subjects as painting and perspective, that the ripest skill and experience will be required from the instructor to have any effect upon the student's work.

There should be a class-room fitted up in the high schools, properly lighted and seated, for the study of drawing, in which the advanced classes might receive their lessons. Perspective, worked with instruments upon drawing-boards, requires special arrangements of tables and desks; and the studies in light and shade, drawing from nature, and painting, necessitate a proper arrangement of light. This cannot be secured in the ordinary class-rooms used for other purposes.

The teaching of the higher classes will be more individual than in any previous class; and considerable latitude may be allowed in the selection of sub-

jects by the pupils themselves, under the guidance of the instructor. It may sometimes be necessary to have classes in projection or solid geometry, to prepare pupils for technical studies which may be required of them in the technical institutes or universities to which some of them will proceed when they leave the high school.

Part of the training should consist of judiciously-arranged home-work, in which the student is thrown entirely on his own resources, bringing the results to his instructor for criticism.

Though art may be more studied, in the form of drawing, in the high schools, than elsewhere, the motive still must be, that drawing is a means of expressing knowledge of some subject, not that a subject is taken up to display skill in drawing. The moment drawing is pursued for no other object than to display skill in touch, or tricks of execution, it becomes one of the "tricks that are vain," and, in the worst sense, purposeless; and, so soon as a youth is becoming satisfied with his own power in some one process, he should be taken from it, and required to work in a medium, or take up a branch of study he knows little or nothing about.

In few countries has the study of drawing as an educational agent ever been thoroughly carried out in the public schools, usually degenerating into an amusement, or treated as an exceptional subject having no sequence or system, to be taken up anywhere, and put down everywhere. We shall see in the course of a few years, when it has been fairly taught

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through the schools here, that the new subject has had great influence on other studies, and been valuable in itself as cultivating undeveloped faculties which previously ran to waste. That is the experience of countries where attention has been given to it; and, it seems to me, will be our experience here.

NORMAL SCHOOLS.

The teaching of drawing in normal schools is for so definite a purpose, that there can be little difficulty in knowing what should be done in them.

The future teacher has to be educated in the language and art of representation, and in the clearest methods of developing the power to draw.

It seems to me this can only be attained by a thorough course of elementary training, so that, when the students are appointed to schools, they can teach drawing to children with as much readiness as they teach reading and writing.

The basis of this would be courses of lessons in freehand outline-drawing on and from the black-board, model-drawing, geometrical and perspective drawing, and designing, as an elementary course.

The more advanced course would be drawing in light and shade from solid models, casts, flowers, and foliage, and from nature, landscapes, and architecture.

Principles of drawing, so that the student can draw a form as well without a copy as with it, are what a teacher wants, and thorough knowledge of all simple processes by which the visible forms of many various objects may be presented clearly to the eye.

Lessons and lectures occasionally given on the art of teaching drawing, the best methods of correcting wrong lines, the simple tests by which errors may be made palpable to the pupil, and convincingly displayed, should be among the agencies in the art-education given at normal schools; and such lectures should be given by art-masters of the greatest experience and ripest skill.

A great part of the work of normal students should be in designing examples of lessons to be given on the blackboard to children, taking a given object, and setting it to the simplest proportions, so that it may be well drawn; and, thus prepared, it should be given by one of the students to the whole school. Each should have such an exercise every week, and every week one student selected to give a lesson to the others.

In addition to this elementary work, an hour each week ought to be given to drawing in light and shade from the solid form, so that the student may acquire at least more knowledge of drawing than will ever be expected of him in the schools he may have to teach.

Unless every normal school has a drawing-classroom, fitted for such study, and well furnished with models and examples, the education in drawing carried on in it will be very meagre and superficial.

The studio in art is to art-study what the laboratory is to chemistry: without actual experiments and manipulation in both, the teaching must be too theoretical.

In the normal school the drawing must be rapid and clear: for the teacher, who will presently have to correct thirty or forty bad drawings at least twice in half an hour, *must* draw quickly or leave half the work undone; and *must* draw clearly, or be only half understood. Fine drawing is, therefore, most essential; and exercises which at first take half an hour to get through ought to be repeated until they can be done easily in ten minutes.

Memory and dictation drawing are also of the highest importance to teachers, and should, therefore, form a due proportion in their studies.

It is by no means essential that a power to draw very elaborate or difficult subjects should be possessed by the common-school teacher, but rather the power to draw simple things accurately, quickly, and without a moment's hesitation. That is what will give them the confidence of their pupils, and, what is quite as necessary, confidence in themselves.

Leaving the specialities of the graded schools, I would like now to address to you some general observations on the work of all.

I have put the time given to drawing in all the schools at two hours per week in the class-room; and, to make it efficient, as much time should be given outside. Little has been said about drawing on the black-board by pupils, because, as the same remark would apply to all the grades, it has been left to be said now.

Every pupil in all the classes and schools, with the exception of the three first classes of the primary

schools, should draw every week upon a large scale on the blackboard ; and to make this practical, when three lessons per week are given, one-third of the class should draw each lesson, so that, after three lessons,—i. e., the work of one week,—every pupil will have drawn on the board. That applies only to such exercises as consist of outline drawing. Shading ought never to be attempted on a black-board, nor exercises in color either.

It is safer to keep the lessons a little below the capacities of the pupils than a little above them, and thus to expect better results in the way of clearness and finish than would be possible if the pupil had to struggle hard every new lesson to keep up to his fresh difficulties. And one principle must be ever remembered ; viz., to set our faces steadily against the making of pretty or very elaborate drawings, which consume too much of the little time that can be given to the subject in day schools; also to impress on the minds of the pupils that drawing is not done for its own sake, but learned as a means of understanding other things: it is illustrative rather than objective.

In the discharge of my duties in the State of Massachusetts, I have drawn up a table of the arrangement of studies as described in this paper, so that those who may not have given as much time and attention to the subject as I have might see in a tabulated form what seemed to me to be the best course of study in all the graded schools. It is intended for circulation in the State through the Board of Edu-

cation; but, in order that you might the more clearly comprehend my views upon the matter, I have had copies of this scheme struck off for distribution among those teachers who feel interested in the subject, and have put them into the hands of the officers of the Association to be so distributed.

I have to ask your acceptance of them as my contribution towards the object of this meeting; not that I consider the scheme by any means complete, but suggest it, under our present circumstances, as a rough plan of operation in a new field by one who, laboring in that field, has borne a fair share of the burden and heat of the day in days gone by and in countries far away.

I shall further trespass on your forbearance to listen to a few concluding remarks.

After a year's experience in examining and inspecting the teaching of drawing in the schools of this country, I am convinced that there is here a great practical genius for education, which is competent to grasp and comprehend any new subject in a much shorter time than it takes to introduce it into the older countries. Though the schools are not yet perfection, nor the whole of the teachers as highly trained as they might be, I have seen drawing taught in class-rooms in this State by teachers who never had a lesson in drawing in their lives, yet who taught it better, and incomparably better, than I ever saw it taught in any European country.

I think that is something to say; and it fills me with the profoundest satisfaction to be able to say it.

Though I have been studying this subject, and teaching the subject, all my working-life, it has been my good fortune to listen to teachers here who have taken it up as one of many subjects they were required to teach, and have seen them give drawing-lessons with a clearness, a precision, and practical skill on the blackboard, surpassing any teaching of the kind I ever saw.

That is the ground of my confidence in the teachers of our common schools being perfectly competent to teach drawing. There is yet an absence of the appliances with which to teach; but we shall get all these in time. It is not possible for this country to remain definitely behind other countries for a long time in anything which is necessary to human progress, or which increases human skill; for, when that is the case, America will have ceased to exist.

Some European countries have had a hundred, 'some fifty, and some thirty years' start of us in this subject; and that is handicapping us rather heavily in the race for distinction in art-education.

Yet, in these days, progress does not depend so much upon the time we have been traveling as the rate of speed at which we run, and the straightness of the road along which we are progressing. From my own observation, I judge that the balance is considerably in our favor in these respects; and, therefore, though we have yet something to learn, we have happily nothing to unlearn: and the prospects of our winning the race are so good, that I expect to live in the days when European travelers

will come across the Atlantic, to study the art-education of America.

This, if it becomes a reality, will be brought about in our common schools more than by schools of art, and by regular teachers like you rather than special teachers like myself: for it is the education which children get that forms the character of a nation; and the demands of an art-loving people will at all times produce a race of ministering artists.

Let the teaching of drawing in the public schools be sound, practical, and sensible, and art schools, museums, and galleries will as inevitably come as that harvest follows seed-time.

The foundation-stone of American liberty says that all men are born free and equal: as teachers, it is our business to see that this means freedom from ignorance, and equality with the best.

The time-honored arts have not been the monopoly of a race or a period: their features may have changed in revolving centuries; the theatre on which their excellence has been displayed has shifted from place to place: yet, wherever there has existed a happy combination of freedom, peace, and prosperity, and love of education, there the arts have flourished, and shed lustre and glory upon the race and epoch which have been free, educated, and artistic.

It falls legitimately within the righteous ambition of any nation to desire that its citizens shall be capable of exercising all the nobler faculties of human nature, among which is a reverence for and love of

the beautiful in nature and art, in the revelations of Almighty Power in natural phenomena, and in the manifestation of artistic skill in the accumulated monuments of art; for such a characteristic will in all times increase the happiness, whilst it adds to the prosperity, of the nation.

Let us reverently hope that a country which has fulfilled some of the conditions of this distinction may also reap some of its rewards.

As the greatest living writer on art has expressed it, "We may abandon the hope, or, if you like the words better, we may disdain the temptation, of the pomp and grace of Italy in her youth. For us there can be no more the throne of marble, for us no more the vault of gold: but for us there is the loftier and lovelier privilege of bringing the power and charm of art within the reach of the humble and the poor; and, as the magnificence of past ages failed by its narrowness and its pride, ours may prevail and continue by its universality and its lowliness."

"The paintings of Raphael and of Buonarotti gave force to the falsehoods of superstition, and majesty to the imagination of sin; but our art may have for its task to inform the soul with truth, and touch the heart with compassion.

"The steel of Toledo and the silk of Genoa did but give strength to oppression, and lustre to pride. Let it be for our furnaces and our looms, as they have already richly earned, still more abundantly to bestow comfort on the indigent, civilization on the rude, and to dispense through the peaceful homes of

nations the grace and the preciousness of simple adornment and useful possession."

The art of the future will recognize no feasts of the gods, nor martyrdoms of saints. "We have no need of sensuality, no place for superstition or costly insolence." But there is in us, as there has been in all great epochs of the world's history, a yearning after the beautiful in thought and language, and form and color; and the country in which love of art is the most general, and its practice in the highest branches the most thorough, shall now, as in the past, be the representative to all future ages of the civilization of mankind.

Vocal Music

AS A BRANCH OF EDUCATION IN OUR COMMON SCHOOLS.

BY J. BAXTER UPHAM, M. D.

Chairman of the Committee on Music in the Boston Public Schools.

BEFORE acceding to the request of your Honorable President that I would present to the Institute a paper upon the subject of musical instruction in our public schools, I felt bound to confess that all I should be likely to say on this occasion had already been said, at different times and in various forms, in my Official Reports as a member of the Music Committee of the Boston schools, and might mainly be found in the manuscript and published annals of the School Board. Premising this, I have endeavored to bring together the main points of these expressed views and opinions, and offer them, with such additions and modifications as my further experience can suggest, for the consideration of the Institute.

It is pleasant, in this connection, to recall to your minds the fact that just forty-two years ago, at the

first meeting of this Association, held in Representatives' Hall at the State House in Boston, a lecture was delivered by Mr. William C. Woodbridge, the eminent Geographer, urging the introduction and adoption of vocal music as a branch of common school education. Mr. Woodbridge had then just returned from an extensive tour of observation among the educational institutions of Europe, and brought back with him a confirmed conviction of the utility and easy practicability of such general musical instruction. He presented his opinions with much clearness and force, laboring earnestly and eloquently, as it was then necessary to do, to convince our educators and the community at large of the importance of his subject. He was fortunate in being able to illustrate his views by a class of pupils which he had trained for that purpose, and whose performances were then looked upon as a miracle of juvenile accomplishment. This effort of Mr. Woodbridge produced a profound impression at the time. By it the first impulse was given to music as a branch of common education in our schools in America.

In December, 1831, Mr. George H. Snelling, in behalf of a special committee appointed at his suggestion, presented to the Primary School Board of the city of Boston an elaborate report strongly urging the adoption of music as a regular study in our primary schools. This Report was, after much discussion, and not without serious opposition, accepted on the 17th of January, 1832, and its recommendations adopted. The experiment received a partial

trial, but the plan proposed was never fully carried into effect. This was the first practical effort towards recognizing the claims of music as a branch of elementary instruction in the common schools in this country.

Shortly afterwards, the Boston Academy of Music was founded, having for one of its objects, as set forth in its first annual report published in 1833, to establish the instruction of vocal music in the public schools. At a meeting of the School Committee held on the 10th of August, 1836, a memorial was received from the government of the Academy supported by two petitions from sundry respectable citizens of Boston, praying that vocal music might be introduced as a branch of popular instruction into the schools of that city. This memorial was referred to a select committee of gentlemen competent to weigh and judge upon the merits of so important a question, who, after a patient and careful investigation of the whole matter, offered a report in its favor on the 24th of August, 1837. This report is signed by T. Kemper Davis as chairman of the committee, and is a most able and interesting document. On the 19th of September following the report, with its accompanying orders, was considered and accepted by the School Board, and the resolves as they came from the committee were passed. But, failing to obtain from the City Council the appropriations necessary to carry their plans into effect, the measure was, for the time, defeated. Meanwhile, one of the Professors of the Academy (the late venerable Dr.

Lowell Mason) offered to give instruction gratuitously in one of the schools, in order to test the experiment; and, the next year, the School Committee, well satisfied with the results of that experiment, were prepared to dispose of the subject finally by the introduction of music as one of the regular exercises of the public schools. This they did by their vote of August 28, 1838. And this vote of the School Committee of Boston, say the Academy of Music in their report of July, 1839, may be regarded as the *magna charter* of musical education in this country.

At the annual meeting of this Association, held in Lowell in August, 1838, Mr. Joseph Harrington brought the subject, a second time, to the attention of the Institute, in a lecture, for which he took for his text, "*The practicability, and expediency of introducing vocal music as a branch of education in our common schools.*" The experiment to which I have already alluded had now been tried, and successfully tried, in two of the Boston schools. Still it was the task of the orator to convince his hearers of the usefulness of this instruction as a part of our common education, and of the possibility of its general introduction into our schools. To this end he adduced the example of other nations,—of Germany especially,—as having already solved the problem in their systems of national education. He argued the practicability of such instruction from the universality of the musical ear,—from the attractiveness of the study, to young children especially,—its healthful influence upon the physical and moral development of the

pupil,—its favorable effect in the discipline of the school,—its economy and the ease and simplicity of the *inductive system* of instruction as applied to music by Pfeiffer, Nageli and others, at the beginning of the present century. This interesting and scholarly discourse of Mr. Harrington, as that of Mr. Woodbridge, was alike honorable to its author and to the Institute, and did much in preparing the way for an intelligent understanding of the subject and the continuance of systematic and determined efforts on the part of its friends to engrraft the teaching of music as a feature upon our public school system.

So far, the action of the School Committee of Boston in this direction had been only partially successful. For ten years but little substantial progress was made, notwithstanding the disinterested and almost superhuman efforts of Dr. Lowell Mason, on whom for most of that time the burden of such instruction mainly rested. At no time within this period was the study of music dropped from the schools ;—but it sustained, at best, a feeble and fitful life, and was not entirely free from the rivalry and jealousies of those whose profession it is to uphold and teach the *art divine*. Moreover, in all this time the subject was ignored in the primary school,—the place of all others where such instruction, if we would ever expect it to attain to anything like a satisfactory result, ought to begin.

In February, 1848, the Rev. Charles Brooks, as chairman of the music committee, presented a report recommending certain changes in the musical instruc-

tion, made necessary by the abandonment at that time of the double-headed system, so called, in the grammar school plan, and the substitution of the system requiring *one* master at the head of each school in its stead. He proposed that thereafter instruction in music be given in each department of those schools where the departments have a separate and independent organization ; that the superintendents of such department be requested to give instruction in music to all the female teachers of the grammar schools and also to all the teachers of the primary schools who might choose to attend. These recommendations were, after considerable discussion and with some modification, adopted by the Board. At this time also, as on several occasions previously, efforts were made for the introduction of music into the primary schools, but without success.

In the year 1849, the plan of electing a Superintendent or Superintendents of musical instruction by the School Board was discontinued, and the sub-committees of the several grammar schools were instructed to procure a teacher of music for the districts under their charge. This was decidedly a step backward.

Nothing further appears to have been done in this direction till February, 1857, when a committee was appointed to take into consideration anew the subject of music in the public schools, and report what action, if any, would be expedient. A report was shortly submitted by this committee which, with its requisite orders, was adopted. Under the operation

of the plan then determined upon, teachers of music were assigned to the several school districts. The teaching was mainly confined, however, to the two upper classes of the grammar schools; the lower grades of that department, as well as the primary, although included in the letter of the school regulations, receiving practically but little, if any, attention. Pianos were placed in each grammar school by the music teachers, at their own risk and expense, and such text-books were permitted to be used as the teachers of music might prefer, subject only to the approval of the standing committee.

A radical defect in this plan, was, as it seems to me, the retention of the district system of instruction, so called,—that is, the employment of a certain number of professional teachers and assigning to them each their separate and distinct field of labor, comprising all the grades of schools within that field. Such a plan is fatal to any systematic, uniform and progressive work. The committee excuse themselves by saying it was the then existing system of musical teaching, and it required time and patience to change it. And in the report of this same committee, in 1860, the following important considerations were suggested to the Board. It was recommended that thenceforth especial effort be made by the music teachers in the Girls' High and Normal School to qualify the pupils of that institution to instruct in music themselves; that the teachers of the primary and the lower classes of the grammar schools be reminded of their duty, under the rules and regula-

tions, to give instruction in music to the several classes under their charge, and the importance that such instruction shall commence with the lowest classes of the primary schools, was emphatically dwelt upon.

The desirableness, in addition to, but by no means in place of, the printed charts and the blackboard,—of some comprehensive and appropriate manual of music, in three parts, adapted for primary, grammar, and normal school instruction, was suggested. It was urged, moreover, that the requirements of this department of study in the Girls' High and Normal School be enlarged so as to include, (to some extent,) the mathematics of music, and some knowledge of harmony and the laws of musical composition, and that music should be recognized in the English High and Latin schools, so far, at any rate, as to require in the curriculum of their academic studies some attention to thorough-bass and counterpoint. It was recommended that pianos of the best construction be purchased and possessed by the city and kept constantly in tune. The article in the rules and regulations requiring the pupils to be examined in music and receive credits for proficiency in that, in common with the other branches taught, and the propriety of strictly enforcing this rule was brought to the notice of the Board. The importance of attention to physical training, to the proper position of the body while singing, and the careful study and practice of vocalization as an art was urged.

The Committee conclude that report by suggesting the propriety of such alteration of the existing provisions for instruction in music as shall provide for the appointment of an acknowledged head to that department, with a sufficient corps of assistants to enable him to cover the whole field of operations,—such head teacher or Director of Music in the public schools, as he might be properly called, to exercise (subject of course to the control of the standing committee) a similar care and responsibility over the whole musical department of our educational system to that now exercised by the master over the schools in the district under his charge. "The tendency of such organization would be," says that committee, "the more thoroughly to systematize this branch of popular instruction, and to carry order and uniformity, method, unity of purpose and exactness of results into its operation, which is in music, in the very nature of things, most difficult, as it is most desirable to obtain."

It was not until July, 1864, that a special instructor in music was provided for the primary schools, and only several years afterwards that the further step was taken of providing a special instructor for the lower classes of the grammar schools, hitherto left without proper and systematic provision to that effect.

Such is, briefly, the history of the origin and progress of public musical instruction in this country, a considerable part of which, as you have seen, is the history of the Boston public schools. It was

established by the persistent efforts of a few faithful and determined men,—among whom Mr. Woodbridge and Dr. Lowell Mason must always hold a conspicuous place. Its progress, in New England especially, though slow, has been in the main satisfactory and sure; and, if marked by epochs of stagnation and even of retrogression, it was only to gain an impetus for its further advance. There is no longer any question among enlightened educators as to the common benefit of such instruction,—if properly carried out,—its agency in the formation of a refined and melodious speech, its efficiency as a means of recreation and of discipline in the school-room, and its humanizing influence upon both teacher and pupil. The enquiry now is,—how can music in its elementary and simpler forms be most effectually, and at the same time economically taught in the common schools of our land. It will be my object, in the remaining part of this paper, to attempt to answer this enquiry. And it may be well to consider and remove at the outset a single preliminary obstacle which yet lingers in the minds of some, even of the advocates and well-wishers of the cause and which sadly dampens their faith in its entire success,—viz., the doubt whether all, or any very considerable majority of the children who attend our public schools can acquire a proficiency in vocal music even under the most favorable circumstances. The earlier advocates in our cause have attempted to convince these skeptics by *a priori* arguments. The actual experience of later years

ought to be deemed conclusive. Says a late master of the Hancock Grammar School, speaking upon this point: "In my school of about one thousand girls, less than a dozen were unfitted, from all causes, for attaining to a fair degree of success in this department of culture." This was before the introduction of music as a required study in our primary schools. More recently the question was tested in the primary and the younger classes of the grammar departments in the Boston schools, by a delegation of the Committee on Education from the State Legislature. The result showed that in the lowest primary class of about forty pupils, whose average age was five and a half years, some eight or ten pupils were found who could not sing in tune. As you proceeded upward in the school these instances became less frequent; and when the second year of the grammar course was reached, in a class of one hundred and eight pupils, of the average age of twelve to thirteen years, not a single discordant voice could be found. The teacher is now accustomed to disregard these exceptional cases among the smaller children, and to require them to participate in the musical exercises with the others, feeling confident that the voice and ear of such delinquents will be brought up to the standard in due time.

With your permission I will describe here the plan of musical instruction as at present carried on in the Boston public schools,—it being allowed, upon competent and impartial testimony, that the plan

as there adopted is, on the whole, satisfactory and successful. The organization of the musical department of those schools is now as follows, viz.:

The general control and supervision of the whole plan of musical instruction rests upon one responsible head, who is called the Supervisor of Musical Instruction in the Boston public schools, etc., whose care and responsibility extend over the whole musical department of our educational system. He is at the same time the teacher of music in the high schools. The grammar department, which, under the new arrangement in gradation, consists of six classes in each school, is under the charge of two professional teachers of music, one of whom is responsible for the teaching in the two upper, the other in the four lower classes of this grade. The primary schools are in like manner placed under the charge of one professional teacher.* All the officers and teachers above alluded to are subject to the executive authority of the standing committee on music, who derive their power from the School Board.

Ten minutes in each session in the primary schools and fifteen minutes each day in the four lower classes of the grammar schools, are required to be devoted to instruction in music by the regular teacher of the schools. The first and second classes of the grammar department devote one-half hour each week to

*For the present year, an assistant teacher is maintained for the recently annexed Dorchester district; but this is only a temporary expedient to suit the wants of the newly-acquired territory.

this study, under the personal instruction of the professional teacher, and, in addition, ten minutes each day are required to be devoted to musical instruction by the regular teachers of these classes, under the general direction of the professional music teacher. In the high schools a specified number of hours each week is given to this study under the personal tuition of the professional teacher, and, in addition, in the Girls' High and Normal School, such instruction is required to be given as shall qualify the pupils to teach in their turn this branch of study in our common schools.

The number of pupils whose musical instruction is under the general charge of the various professional teachers may be stated as follows:

In the primary schools under Mr. Mason,	- - -	13,903
In the four lower classes of the grammar department under Mr. Holt,	- - - - -	12,966
In the two upper classes under Mr. Sharland,	- -	2,732
*In the high schools under Mr. Eichberg,	- - -	1,408

This in August, 1871.

A definitely arranged programme of the course of instruction, so far as the primary schools are concerned, has been adopted and printed in the Rules and Regulations, and a similar programme is in progress for the grammar schools. Pianos, the best of their kind, have been placed in all the high and grammar school-houses and, to a considerable extent, in the properly graded groups of the primary schools;

* Besides which there are in the primary and grammar schools in the Dorchester district under Mr. Wilde, 1,906.

which pianos are required to be kept in order and in tune, and to be used as *aids to, not as substitutes for*, musical instruction. The rooms without pianos are being supplied with a simple pitch-pipe which can be made to give any sound of the middle octave in the treble clef. A series of elementary charts, clear, well-arranged, and progressive, illustrating the course of instruction by an easy and first gradation, is placed in every class-room. Accompanying these charts is a manual for the teacher, explanatory of their use, which is likewise placed in every room.

An important point is made in the establishment of classes for normal instruction in music among the teachers of all the schools, which is being carried out more or less faithfully by the professional teachers.

A combination of vocal and physical training, in connection with their musical tuition, has been devised for the younger pupils by the joint effort of the teachers of vocal and physical culture and of music. A systematic and progressive course of musical instruction is thus given to all the pupils of the public schools in the city of Boston, except the boys of the Latin and English high schools, where the plan is not yet fully in operation, commencing with the children of five or six years of age, when they first enter the primary school-room, and ending with the highest class of the pupils of the Girls' High and Normal School, who are themselves preparing to become teachers in their turn.

To any one who will visit these schools, and who

will attentively observe the operations of this plan of musical instruction, two features will present themselves as characteristic and essential,—the thorough scientific training imparted to the pupils, and the provision requiring the instruction to be given mainly by the regular school-teachers, aided and superintended by a limited corps of professional teachers of music. He will notice also that this training begins with the youngest pupils,—indeed that here the greatest care and pains is taken in order that the tender shoot may be so nurtured and directed as to ensure its future full and vigorous growth. He will note that the Pestalozzian or *inductive mode* is mainly used in all the stages of this instruction,—in the teaching of *sounds before signs*,—in leading the pupil to observe, by hearing and imitating sounds, their resemblances and differences, their agreeable or disagreeable effect, instead of attempting to explain these things,—in teaching but *one thing at a time*, rhythm, melody, expression, etc., etc.,—in making him practice each step of each of these divisions until they are masters of it before passing to the next,—in giving the principles of theory *after practice* and as an induction from it.

At first very little is done with text-books. A blackboard, a piece of chalk and a pointer are the implements mostly required. Very soon a series of charts is brought in, by which the teacher fixes the attention of the pupil upon the signs and characters employed in musical notation, and leads him by gentle and progressive stages up to the point at

which it is as easy for him to read at sight, and express in singing tones a musical phrase upon the staff, as to understand and articulate in words a paragraph in his School Reader.

Let us go over this method of instruction in somewhat of detail. And I will confine your attention more particularly to the stages of instruction during the period of primary and the lower half of the grammar school pupilage, *i. e.*,—a period extending from the age of five to about twelve or thirteen years, this being the compass within which the large majority of the children attending our public schools may be found, and, to my mind, by far the most important age for public musical education.

The first attempt of the teacher is to gain the attention of the children by singing to them some easy melodic phrase within the range adapted to their voices, and asking them to repeat it after him,—to imitate the sounds he has given them in their proper order. This, after a few trials, the majority of the class will do. Some ten or fifteen minutes are spent in this way, and they have taken their first lesson in music. The interest of the children is excited, their attention aroused, their appreciation of musical sounds for the first time, perhaps, awakened. A few lessons are given in this way at the outset. It is purely a matter of note-singing of the easiest and simplest kind. It is an appeal to the imitative faculty which young children possess in so great a degree of perfection; and hence the greatest care should be taken that the example be a proper model

for imitation, as regards method and style and purity and correctness of tone, even in the utterance of the simplest musical phrase. These preliminary note-lessons should therefore be given, when possible, by the professional teacher himself.

Even at this early stage in the musical instruction, great attention is given to the formation of a proper quality of voice. The difference between a good and bad quality is illustrated by examples. The child is called upon to use a smooth and pleasant intonation in speaking, in reading, in recitation and in singing. Above all he is taught to avoid a noisy use of the voice.

As preliminary to the exercise of the voice in singing,—and it applies to reading and declamation as well,—the young children are trained in the following points :

1. A proper position of the body.
2. The right management of the breath.
3. A good quality of utterance (as just mentioned.)
4. The correct sound of the vowels.
5. A good articulation.
6. An intelligent expression of the sense.

Care, too, is to be taken in the singing-exercises of young children that a too great compass be not attempted. The child is allowed to sing only in the middle register, or where he makes the tones with the least effort,—commencing our instruction with the rote singing as already stated, the first six sounds of the G scale are only attempted at the outset.

Even within this limited range, many of the best juvenile songs may be found. After the voice has been well practiced in this compass, it may be extended upward and downward to a judicious extent, taking care *not to strain* the voice in the least degree.

The pitch and compass of the voice having thus been attended to, musical phrases of easy rythmical structure are next taught in double and in triple time, the rote-method still being used. Various devices are resorted to here to attract and keep the attention of the child to the lesson (i. e., marking the movement by a curve upon the blackboard, holding up the hand and pointing out the motives, sections and phrases upon the fingers in turn, etc.) At this stage, musical notation, in its simplest form, is begun. The teacher explains,—gives examples which the pupil is required to imitate. With all these, practical exercises upon the sounds of the scales are intermingled.

In the second year of primary instruction, the pupil is taught to know the different kinds of notes and rests, to understand the nature of quadruple and sextuple time, and the manner of beating the same, the accentuation as applied to music, etc. He is also mildly indoctrinated into the mysteries of the chromatic scale, so far as the simple change from the natural, into the keys of G and F major is concerned.

In the third and last year of primary instruction, he is taught to describe by its intervals the major diatonic scale, etc., etc.

In the lowest class of the grammar schools the

pupil is rapidly led over the whole ground taken in his primary course, now and henceforward by reference to the musical characters,—rote-teaching and rote-singing being for the most part abandoned. The child is now expected to begin to read the notation of simple musical phrases at sight.

In the sixth or lowest class is commenced an intellectual study of the sounds of the scale. Children are taught to recognize any sound of the scale by its scale name; as 1, 2, 3, 1, 4, 2, 5, 6, 4, 7, 8, etc., and to produce the same at the dictation of the teacher. This to still further educate the ear. One or two minutes are spent in this exercise, which is followed by a representation of the sounds in written notes upon the staff, which trains the eye together with the ear.

The ear soon becomes so well trained, that children will go to the blackboard and write the scale, or *pitch-name*, of any sound given with the syllable *la*. This drill of single sounds is followed by triad practice, after which the class is divided, and the pupil is trained in two-part harmony.

This, if followed by the practice of two-part songs upon the charts, together with the beating of the time, and, in addition to this, in the fifth and fourth classes, by the chromatic scale and a study of the keys which grow out of it.

It is safe to say that at the end of the school year the fourth class will have such practical knowledge of all the nine different keys, that they will sing correctly any choral, which may be written in any of those keys, at sight.

The pupils become familiar with the position of each scale upon the staff, the same as in the key of C. This brings us through the two lower classes and completes the second series of charts, which covers the major scale in nine different keys.

In the fourth class is commenced the study of such intervals as are necessary to a thorough understanding and analysis of the triads on the different degrees of the scale, such as the major and minor second, major and minor third, perfect and diminished fifth, etc.; also the most usual form of the chord of the seventh is taught. After the class is familiar with the major and minor thirds, there follows an explanation of the Roman numerals used to indicate major and minor on different degrees of the scale.

This, followed by an explanation and analysis of fifths, develops an intelligent idea of the triads as found on the different degrees of the scale.

These triads are first studied separately, and the pupils are shown some of the exercises in one and two parts, that grow out of each triad.

The triad on the fifth degree is introduced in the same way, followed by exercises in one and two parts, composed of both triads. The instruction proceeds in this way, until all the triads have been introduced in the exercises; this is continued, with two-part singing, through the fourth class.

In the third class this ground is reviewed, adding the other triad, which gives the three parts.

Then follows the name for the harmony which

grows out of the major triad on the first degree, viz: "Tonic Harmony."

In studying the harmonic relation of sounds, the pupils are gradually becoming familiar with the groundwork of three-part singing, as based upon the triads, and in acquiring a practical knowledge of the *inversion* of triads.

At the end of this year, the pupils can readily sing in plain three-part harmonies, and should understand all the signs and characters used in musical composition, and be able to comprehend and read at sight any of the music found in our ordinary collections of psalmody.

I might, if the time and your patience would permit, carry these descriptions and illustrations on through the upper classes of the grammar, and the department of high school instruction; but this, as I have said, is as far as I think it expedient to proceed with them for the present; since it covers the most important part of the ground to be occupied in the general introduction of a system of musical teaching in the common schools of the land.

An essential element in the plan of such teaching, as we have seen, is this, that it be given mainly by the regular school-teachers, with the aid and general direction only of a professional teacher. We have seen that a single professional teacher can superintend the instruction of a large number of pupils,—just how many will depend upon circumstances. The number may be more or less according to the density of the population, and to the general ability

of the corps of regular teachers employed. In a city like Boston, where we may perhaps say without boasting, that the standard of qualification is high; from one hundred and sixty to two hundred and forty schools or classes, representing eight thousand to twelve thousand pupils, can thus be taught by a single professional teacher. In the cities of Salem and Lowell, and some others in the State of Massachusetts, a single intelligent head has been found sufficient. The salaries might vary from one thousand or twelve hundred to three thousand dollars per annum. My belief is that in towns and cities not exceeding a population of forty to sixty thousand inhabitants, or in rural districts where a group of smaller towns and villages of perhaps half this population in the aggregate exists, and which could all be conveniently visited in a circuit of a week or ten days' extent, a single professional teacher only would be required. And in the latter instance, a competent man, who should be a resident of the district, ought to be had for twelve hundred dollars per annum.

I take it for granted that all the regular teachers *can* do their part in such instruction, if they will. It requires, in the system we have been just considering, no special musical ability or previous training. An *aptness to teach* only is necessary, and any person, who is fitted in other respects to hold the responsible position as a teacher in a public school, has the ability, I contend, to learn in a very short time, under the direction of a competent professional

head such as we have named, how to teach the elements of music as well as the other studies required in our common schools. Nor is it necessary that the teachers should be able to sing, in order to be successful in this branch of study, though of course it is an aid. On this point says Mr. Holt, of the Boston Schools, in his report to the Music Committee, in 1869, "In the short time within which music has been regularly and systematically taught in the classes under my charge, only seven out of the two hundred and fifty-one teachers, who have come under my observation, have proved themselves unable to do their work satisfactorily. Of these seven, three exchange work with other teachers at the time of the music lesson, one employs a teacher from outside to aid her in this part of her work, who is present at the time of my visit to receive my instructions, while in three rooms the work is imperfectly done.

"With regard to the progress made in different classes," continues Mr. Holt, "it varies in proportion to the faithfulness of the teacher. I find that teachers, who are regarded as superior in other branches, obtain the best results in music. And many of my best teachers are among those who had no idea that they could do anything in music when we commenced. * * * * I visit each of the two hundred and fifty-one teachers with their classes," continues Mr. Holt, "once in every four weeks; in this way I am able to help every teacher over any difficulty she may encounter, and to shape my instructions to the wants of each class."

Says Mr. Philbrick, in one of his recent reports: "The improvement in the method of teaching music has very naturally helped the improvement of the methods of handling the other branches. As a general rule, teachers in an elementary school, who teach one branch well, teach all branches well."

The cost of musical teaching to any city or town, or to a group of towns situated as I have said, having an aggregate population of say twenty thousand inhabitants (one-fifth of whom may be reckoned to be of school age) need not exceed the sum of one thousand three hundred and fifty dollars per annum for the period I have named, and would be made up as follows:—

The salary of the professional teacher, - - - - -	\$1,200
A set of charts, with stand complete, for each school,	
(say for eighty schools with an average of fifty pupils each, \$11.25 x 80 = \$900) which should last, with careful treatment, six years, \$900 ÷ 6 =	150
Making, as above, - - - - -	<hr/> \$1,350

The manual for the teacher, as also the pitch-pipe, is not included in the above expense, it being supposed that each teacher would desire to purchase and possess them. And with this manual in the hands of the teacher, the charts and the blackboard, I believe that up to the age I have indicated textbooks in music may be dispensed with altogether. But if to this be added the cost of a pitch-pipe and a copy of the Teacher's Manual, (explaining the use of the charts,) for each school, the cost (on the

supposition that these, like the charts, would last by careful using six years) would be increased by twenty-six dollars and sixty-seven cents,—making a total of one thousand three hundred and seventy-six dollars and sixty-seven cents, or a trifle over thirty-four cents for each scholar per annum.

With some such plan of easy and progressive musical instruction, and with such simple addition to the mechanism of our common school system of education, an elementary knowledge of music could be diffused throughout the land. More than this, such teaching would have its influence upon other than musical acquirements merely. It would tend, as I believe, more than any one measure as yet adopted in our public schools, to eradicate that soulless primary school tone which has passed into a proverb, to correct the prevailing habit of inadequate and defective utterance and lay the foundation for the acquirement of that nameless element in spoken language which makes up the "music of the phrase," **REFINED AND EDUCATED SPEECH.**

now almost wholly lost, will doubtless be found in the original and classic works of literature—such as are still to be called the great classics—but hardly any portion can be said to have been of much value or interest in any other field than English

English Literature, AND ITS PLACE IN POPULAR EDUCATION.

BY FRANCIS H. UNDERWOOD.

THE prosperity of a nation comes from well-directed industry; its happiness from the impartial execution of equal laws; its greatness from the indomitable spirit of its people; but its lasting glory from its letters and art. No seats of empire have received so much of the homage of mankind as the small cities of Athens and Jerusalem. Merely commercial cities, like Tyre, Carthage, and Palmyra, are soon forgotten. Even Rome is less reverenced as the home of the Cæsars, the mother of modern states, and the source of modern civilization, than as the seat of a magnificent literature, that has enriched every language of Christendom, and is still a light to the learned world. Success in arms and the acquisition of territory give temporary renown, but after the lapse of a few centuries, *everything but the great thoughts of a people perishes*. Not one stone

stands upon another on the site of Persepolis, and no one can now enumerate the tribes that were subject to the Persian monarchs, or fix the limits of their empire. But the precepts of Zoroaster (the majestic contemporary of Abraham) still survive, indestructible amidst all the vicissitudes of human affairs. The history of letters refuses to be divided by the reigns of monarchs, and is measured by the appearance of great authors,—as the zodiac is measured by its constellations. We speak of the age of Dante, careless of what Julius or Nicholas or Gregory might occupy the papal chair. The times of Chaucer we know; but King Edward III. is only a lay-figure, a mere accessory in the picture we imagine. The idea of Don Quixote is more real to us than Philip II.; and the time may come when the sea-fight of Lepanto will be remembered chiefly because one of Don John's victorious galleys carried as a common sailor the great Cervantes. We know that the illustrious Goethe was a counselor of state; but the monarch he served is already a shade. So, to return to English history, we speak of the age of Spenser, Bacon, and Shakespeare; and the name of the great Elizabeth has been made into an adjective to denote the brilliant epoch in whose glory she had no share. Milton, once the Latin secretary, outshines the great Lord Protector; stolid Queen Anne lives only in the memory of the elegant essayists of her time. Further on we trace the same intellectual lineage. Hanoverian, Georges and Williams are naught. It is the age of Scott, of Byron, and

Wordsworth,—the age of Carlyle, Macaulay, Dickens, Thackeray, and Tennyson.

In this country all things are so new, and political events have such an intense significance, that we do not look at affairs as posterity will look at them. But who can doubt that, when the true perspective has been adjusted, ours will be known as the age of Emerson, Irving and Hawthorne, — of Bryant, Longfellow and Whittier,— of Lowell and Holmes? Who can doubt that in the next century people will say to their grand-children, “*I heard Emerson in my childhood. I once saw the gracious smile of Longfellow. I have felt the electric stroke of Holmes's wit. Shall I ever forget Lowell's features, gleaming as though from an inner light, when he recited the ‘Ode to the ever sweet and shining memory of the sons of Harvard that died for their country?’”*

The place which the study of literature should hold among other scholastic pursuits is hardly doubtful. While other studies are pursued mainly for discipline, literature is at once a means and an end of culture. Language is the most marvellous instrument of human thought, and its study employs our noblest and strongest powers, as well as our most subtle perceptions and refined tastes; and in literature, as the appropriate end of linguistic studies, we derive the highest pleasures of which our natures are capable.

Literature is a part of the world's history, and in many respects the most important part. The rise and fall of dynasties, and the changes in forms of

government, are chiefly important on account of the light they throw on the progress of political science, and the hope they give of the advance of mankind towards justice and equality. But the real life of a nation is preserved in its literature ; and the student who is familiar with the personal memoirs, letters, plays and songs of any era, has a better knowledge of the character and condition of the people than all the formal histories can give him.

But I do not forget that this is an assembly of instructors, and that it is properly expected, in an essay upon the study of literature, that some practical suggestions should be made respecting its pursuit in public schools. Let us endeavor to find the proper place in a popular course of instruction for beginning the study of literature.

We shall suppose that the art of reading intelligently has been acquired,—that arithmetic has been begun,—that the general outlines of geography have been made familiar, and that the relations of words in sentences are understood. At this point the judicious teacher should consider what further subjects are of the most importance to the average pupil. The studies commonly pursued next in an English course,—besides using higher reading-books,—are the higher mathematics, history, physical geography, some departments of natural science, the first elements of physics, rhetoric and mental philosophy. English literature has rarely found a place.

It is undoubtedly the judgment of the best teachers, that mathematics should be continuously studied,

and form a part of every day's routine. Next in order come the elements of physical geography, and such branches of natural science as the school has facilities for teaching,—special prominence being given to physiology,—or rather to so much of physiology as applies to the proper care of the body and its surroundings.

Whatever we may think of literature as the embodiment of thought,—of rhetoric, which fills a sort of tailor's place to fit out thoughts in smooth garments, and is often, like other tailors, inclined to think more of the elegance of the clothes than of the soul of the wearer,—and of mental philosophy, which has been groping in mists, from Plato down to Herbert Spencer, and has never found the *Ego*, nor got a step nearer the First Cause,—all these interior processes and furnishings must yield in point of utility to the sciences that put us into intelligent relations with the world we inhabit.

A gentleman told me of a rambling excursion he once made in company with Horace Mann and one or two other friends, in the fields and woods of Virginia, near Washington. "Don't you think it shameful," said the great educator, "that we have been so badly brought up? Here are we, all of us pronounced to be Masters of Arts or Doctors of Laws, by the authority of College faculties. But what arts are we masters of? We scarcely know a tree or shrub, fruit or flower, bird or animal, especially out of our native State; and we dare not taste a strange berry, or smell a new blossom for fear of being poi-

soned. If we were starving, we should not know how to satisfy our hunger. Nature is a sealed book to us ; and yet the earth is fruitful, the woods and fields are full of life. We alone have no place at the table where all are fed."

To dwell upon the subjects suggested in this conversation would consume too much of our time at present. Let us pass on to consider a few other branches of study. As for rhetoric, it would seem to be a waste of time to study it formally,—at least, in any short course. Any competent teacher ought to be able to point out to pupils the correct use of language, and the propriety of figures of speech,—and this should be done as a part of the daily exercise in reading. The style which is commended by such pedants as Blair, is what all our best writers strive to avoid. Mental and moral philosophy cannot be pursued with advantage by immature pupils, and should certainly be postponed to near the end of the course. There remain the two topics of history and literature. I do not see that history is entitled to any great precedence. If a pupil has such an acquaintance with English history as he would gain from the small but admirable work of Charles Dickens, it would seem best that he should next get a knowledge of the writers of the various epochs, and that the political and literary events of the country should thereafter be taken in connection. The same remark may be made with regard to the history of the United States. If you attend an examination of a Boston grammar school, you will

find one or more of the blackboards covered with *anno domini* dates ; and boys and girls will be eager to give you some fact, more or less important, that is associated with every date. But if they were asked by some foreigner, who was just beginning to read our literature, when Irving was born, or what works he had written, who Jonathan Edwards was, whether Cooper was a greater novelist than Mrs. Southworth, whether the "Atlantic Monthly" was equal in merit to the "N. Y. Ledger," and whether Emerson wrote often for the "Waverley Magazine,"—what answers would he get? But surely, in any point of view, a knowledge of our chief poets, historians, and essayists is of as much consequence as the opinion and doings of James K. Polk, Wm. H. Harrison, Franklin Pierce, and similar persons with whom our historic muse is occupied.

One of the grave errors in our system is in the persistent reading and re-reading of books that are intended mainly for exercises in elocution. It is true that many of these series of readers have been compiled by scholars, and contain many admirable selections ; although I have seen an advertisement by one publisher who claims as the peculiar glory of his set of books, that the pieces they contain are mostly original ; as though the style of a mediocre person should be preferred, as a model for students, to the finished sentences and poetic gems from works of genius !

But the best of our school reading-books are merely a kind of literary *hash* ; and I am much of

the opinion of the Frenchman who had become tired of the mysterious article bearing that name in his boarding-house, and who exclaimed to the landlady, "I do not like '*ashes*, I prefer *cólmeat*. Please take away ze 'ash, and give me some *cólmeat*."

Now reading occupies a part of every day in school, and should receive even more attention than it does. But it must be admitted that the miscellanies we place before children,—half a dozen in a course,—are not on the whole very attractive; and they are certainly not useful, considering the time they occupy. On one page is a *goodish* poem; on another a bit of a sermon; here a tolerable story; there a speaker's peroration. The facts belong to no one age or country, and the style is as various as the matter. How utterly unphilosophical this proceeding is, either for the acquisition of knowledge, or for the formation of taste, this assembly of teachers ought to know.

And this leads to the last point and the main purpose of this essay,—which is to urge that the course of daily reading in grammar schools be wholly reformed and utilized; that after two or three preliminary collections have been gone through, and the pupils are able to read with tolerable fluency, the subsequent or higher reading-books be discarded, and their further daily practice be in systematic works that will not only give proficiency in reading, but inspire a love of nature, impart useful knowledge, and cultivate a taste for literature.

A good example has already been furnished in

Dr. Worthington Hooker's Child's Book of Nature. Dr. Asa Gray's treatise, entitled "How Plants Grow," is another of like character. Dickens' Child's History of England (already mentioned) would be an excellent work for young pupils.

Should the course here recommended be generally adopted, we should very soon find the results of the labors of scientific explorers and *savans* put into popular and attractive books to meet the demand.

Instruction in English literature should go on with these branches in equal step. Any well-disciplined child of fourteen years (and perhaps less) is ready to receive judicious lessons in this department. For this purpose it is not necessary to begin with Chaucer, nor to follow any rigid rule of chronology. Bacon and all the philosophers, and Taylor and all the theologians, *may wait*. But the teacher can take works of acknowledged merit that are capable of being understood by youths, and lead his charge through pleasant fields until by imperceptible degrees they reach the heights. When they have been accustomed to notice peculiarities of style and modes of thought, and have in other respects sufficient maturity of mind, they can trace the development of language historically, and view the treasures of our literature as in a panorama.

It will be advisable, in all cases where the means allow, to read certain works entire. Thus, Shakespeare cannot be profitably studied by means of selections, but the best of his plays should be read from Hudson's or Rolfe's editions. No separate

scenes are either satisfactory or instructive. Other works may be named for thorough reading, such as Milton's *Comus*, Goldsmith's *Traveller* and *Vicar of Wakefield*, Lowell's *Vision of Sir Launfal*, Longfellow's *Evangeline*, Whittier's *Snow Bound*, Emerson's *May Day*, and one or two of Tennyson's *Idylls of the King*.

But all educators know that the cases in which complete works of this kind can be procured in sufficient numbers for the use of a school will be exceptional. And in any event it will be desirable to supplement this course with some volume of selections, arranged in historical order and containing the necessary biographical, critical, and linguistic notes. The benefit of such a course of instruction introduced into the grammar schools, and continued in the high schools, would be incalculable. The teacher would make a daily study of the author from whom the lesson was to be taken. He would fill out the narrow outline of the biography. He would illustrate and refine upon the critical estimates, giving his own views, and stimulating the pupils to examine for themselves, and to form habits of independent judgment. It is doubtful whether any branch of instruction would yield more certain and more abundant fruit.

In my boyhood, I never, by any accident, had my attention directed to the beauties or excellences of English literature. *Paradise Lost* was used only for the odious exercise of parsing; and the noblest lines of Milton are to this day connected with the

pattering of conjugations and declensions. No more effectual way could be taken to disenchant the student than by breaking the lines, as upon the wheel, and analyzing the still quivering members by the dull rules of syntax.

In a few modern schools English literature receives attention, but they are generally high schools. The bulk of our children, however, never reach the high schools; and, if they did, there is no reason why the study should not be taken up earlier. Abolish the profitless reading of scrap-books, and let each day's reading be given in turn to some branch of natural science, to history, and to literature. The elements of good reading are few and simple, and these can be attended to *as incidents*. If special practice in elocution is desired, the teacher can make use of the work of Professor Munroe. Each pupil will show by his voice and manner whether he appreciates what he is reading. The cultivation of natural and proper tones, the adaptation of manner to the style,—as in narrative or descriptive prose, and in humorous, pathetic, or dramatic verse,—will come naturally, under the skilful teacher's care.

There cannot be too much reading of good authors. No one ever became an elegant or even a correct writer by following the precepts of grammarians, or the prim examples of literary Pharisees, any more than he could learn to swim by practicing the motions upon a table. A knowledge of the structure of our language and the natural relations of its parts, the power of using appropriate imagery, the nice

discrimination between apparent synonyms, and the easy, fluent motion in which thought rolls on, can only be acquired by long and intimate acquaintance with the works in which these traits are exemplified.

Experience has proved that even young pupils take up these courses of reading in literature as well as in science with avidity. In schools where they have been introduced, no exercises are so eagerly anticipated or so thoroughly enjoyed.

We take great pains to make classical students appreciate the simple majesty of Homer, the elegance of Virgil, the sublimity of the Greek tragedians, and the vigor and brilliancy of Horace. But the body of English literature, as it exists, contains more of grandeur and beauty, more of pathos and wit, more of humor (a quality in some respects peculiar to our race), more of fervid oratory, and more of noble history, than the stores of the classic languages combined. I am a strenuous advocate for classical education, but I maintain that a boy who feels the greatness of Burke and of Webster is more apt to acknowledge the power of the Oration on the Crown, and of that for the Poet Archias. He who has been thrilled by the sublimity of Milton will grow enthusiastic over the pages of Virgil and Dante; and when the vast world of Shakespeare's thought has been opened before his vision, he will see more clearly what is immortal in the Iliad and the Odyssey.

Our own literature must be considered as the best part of our history, and the just basis of our national

pride. It may be said to have commenced within the memory of men now living; for the venerable Bryant is the earliest of our great poets, and Irving, Cooper, and Channing were the first of our classical prose writers. In less than fifty years we have produced works in all departments of human thought which the world will not let die, and which our mother country is becoming proud to own and adopt. Let us see to it that our youth are taught properly to appreciate these treasures, and for that end, let us endeavor to appreciate them more fully ourselves.

and the corresponding \hat{P}_n is given by

$$\hat{P}_n = \frac{1}{\sqrt{n}} \sum_{j=1}^n \hat{\theta}_j \hat{\theta}_j^\top - \frac{1}{n} \mathbf{1} \mathbf{1}^\top, \quad (1)$$

where $\hat{\theta}_j = (\hat{\theta}_{j1}, \dots, \hat{\theta}_{jN})^\top$ is the estimated parameter vector for the j -th observation.

It is well known that the sample covariance matrix \hat{P}_n is a consistent estimator of the true covariance matrix P (see e.g. Silvey, 1980).

For the estimation of the parameters θ_j , we can use the maximum likelihood method or the method of moments. In this paper we will use the method of moments.

The method of moments is based on the assumption that the observed data are generated by a process with a certain underlying distribution.

In this paper we will assume that the observed data are generated by a process with a normal distribution.

We will also assume that the parameters θ_j are constant over all observations.

Under these assumptions, the method of moments provides a consistent estimator of the parameters θ_j .

The method of moments is a simple and effective way to estimate the parameters of a process.

In this paper we will use the method of moments to estimate the parameters of a process with a normal distribution.

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